

“Paying tax is part of life”: Social norms and social influence in tax communications

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Acknowledgments

This work was conducted in the Tax Administration Research Centre at the University of Exeter, jointly funded by the Economic and Social Research Council, HM Revenue & Customs and HM Treasury (grant no. ES/K005944/1); we are very grateful to our funders for their support. The views expressed in this report are the authors' and do not necessarily reflect those of the funders. We are also very grateful to Miguel Fonseca for his comments on an earlier draft of this paper, and to participants of the 'Taxation, Social Norms and Compliance' conference held in March 2014 in Nuremberg, whose feedback has been very valuable in shaping the current paper.

Abstract

A number of studies on taxpayer interaction, from large-scale surveys to field experiments, reveal that people's tax compliance attitudes and behavior change after they discuss tax with other taxpayers. However, we know very little about the content of these communications and the processes by which they produce changes in tax compliance. To address this knowledge gap, we employed an in-depth analysis of naturally-occurring online discussions about income tax among software developers. Using a discourse analytic framework, we report an empirical analysis of 120 online interactions between taxpayers, providing a categorization of these interactions. Interactions ranged from asking for information about tax regulations and receiving such information, to a variety of interactions aimed at persuading defiant individuals to comply with tax laws. These persuasion techniques ranged from stating the benefits of compliance, to threats of severe economic and reputational consequences. Overall, this study is the first in-depth empirical investigation of social influence processes in taxpayer communication. We discuss how the results inform research into social norms and tax compliance, tax communication in social networks, and persuasive messaging in tax compliance campaigns.

Keywords: *tax compliance, communication, social influence, discourse analysis, conversation analysis*

1. Introduction

In the summer of 1942, Walt Disney was persuaded by then US Secretary of Treasury Henry Morgenthau to create two propaganda cartoons that would encourage Americans to pay their income tax, a tax that had recently increased to help the war effort (the ‘victory tax’). Under the slogan ‘taxes to beat the Axis’, Donald Duck features as a taxpayer who is subject to the influence of two opposing characters. The ‘good duck’ (the first appearance of Scrooge McDuck) encourages Donald to store his income away for the upcoming tax payment dates. The ‘evil duck’, however, is eager to convince Donald to spend his money on very different ‘dates’, at the local club. Scorning the ‘good duck’s’ appeal to save income to fund the soldiers, the ‘evil duck’ urges Donald to ‘forget it!’, ‘we’ll take care of that later!’, and ‘spend it, it’s *your* dough!’. Despite nearly being persuaded by the ‘evil duck’s’ hedonistic proposals, Donald eventually makes the patriotic choice and decides to save his income for tax payments (*Donald Duck*, 2013)¹.

This short animation illustrates an important insight about taxpayers’ (non)compliance decisions – they are often influenced by others in their social environment. Indeed, a range of large-scale studies suggest that people’s taxation attitudes and behaviour change when they discuss tax with others (e.g., Rincke & Traxler, 2009; Stalans, Kinsey, & Smith, 1991; Torgler, 2005). However, we know very little about the actual content of such communications: What do people talk about when they discuss tax? What exactly do they say that influences others? Which arguments are effective in influencing others’ compliance decisions? This study aims to provide empirical insight into how social influence occurs in communication between taxpayers.

In order to explore these questions we chose to focus on naturally-occurring discussions among taxpayers. We selected discussions from public Internet forums for professionals; faced with tax compliance decisions, these professionals seek the advice of others in their profession. For instance, forum users may ask whether to disclose to the tax authority that they are trading, whether

¹ We are grateful to Limor Riza for alerting us to this example in her presentation given in Exeter in March 2014.

to report their full income, as well as requesting advice about how to comply (e.g., about rules and regulations, others' experience of audits, etc.). These initial enquiries are followed by responses from other professionals who are members of the online forums. Our aim is to analyze the content of these exchanges between forum members, and their potential implications for compliance. In order to offer an in-depth analysis of these online interactions, we employ the theoretical and methodological toolkit of discourse analysis as used by psychologists (see Potter & Wetherell, 1987) – principles and methods especially designed to understand communication in social interactions.

Following an analysis of 120 exchanges among professionals on online forums, we identify five broad types of interactions. (1) Many interactions are about giving and receiving information about tax rules and procedures. (2) Other communications are focused on communicating compliance social norms with the purpose of influencing others to comply. (3) To persuade others to comply, people may also communicate the benefits of paying tax (e.g., ease of mind, reputation). (4) If forum users display defiance in respect of their tax obligations, others will sometimes employ direct persuasion to urge them to comply. (5) And finally, forum users will issue a range of warnings and threats to defiant professionals - warnings of penalties, audits, and reputation loss. Throughout our analysis, we demonstrate the way in which these interactions are largely geared towards influencing others to comply. As such, these results contribute a refined understanding of social norms processes in tax compliance.

Although past survey studies (Stalans et al., 1991) and simulations (Hashimzade, Myles, Page, & Rablen, 2013) have proposed that taxpayer interaction has repercussions for compliance via influencing attitudes and perceptions of social norms, it has been unclear what form this influence takes. In our analysis, we provide an in-depth analysis of how social influence occurs in taxpayer communication, and provide directions for further formalizing these findings.

In the following sections, we begin by analyzing the gaps in current knowledge regarding communication and tax compliance, and describe why discourse analysis is particularly well suited

to address unanswered questions. We then outline our analysis and results and, in the final sections, discuss the novelty of the study's findings, potential to generate further research, and implications for tax administration.

2. Previous research

2.1. Communication and Tax Compliance

This study is interested in how communication between taxpayers is related to compliance or noncompliance with tax laws. In particular, we are interested in how communication relates to those factors that are thought to determine tax compliance decisions. The tax compliance literature postulates a variety of factors that are thought to effect taxpayers' non-compliance decisions, such as: (a) beliefs about sanctions and audits (e.g., Allingham & Sandmo, 1972; Slemrod, Blumenthal, & Christian, 2001); (b) taxpayers' individual values or attitudes (e.g., Cummings, Martinez-Vazquez, McKee, & Torgler, 2006; Lewis, 1982; Schmolders, 1970; Torgler, 2002); (c) societal norms (e.g., Bobek, Roberts, & Sweeney, 2007; Myles & Naylor, 1996; Wenzel, 2004a); (d) fairness and justice concerns (e.g., Braithwaite, 2009; Kirchler, Hoelzl, & Wahl, 2008; Wenzel, 2003); (e) knowledge about the law (e.g., McKerchar, 1995); (f) bureaucratic and technological aspects of tax administration (Boll, 2013). Although different paradigms of tax compliance research have given primacy to one or another of these factors (e.g., for instance, taxpayers as strictly rational actors versus strictly governed by group norms; for a discussion of paradigms, see Alm et al., 2012), our conceptualization of taxpayer behavior is such that compliance decisions may be influenced by all of the factors described above and potentially additional ones. This complex view of taxpayer behavior is shared by many tax compliance researchers, in particular by those relying on psychological theory to understand tax compliance decisions (e.g., Braithwaite, 2009; Kirchler et al., 2008; Wenzel, 2004b).

Taxpayer communication is likely to be related to many of the factors mentioned above, in turn affecting compliance decisions. For instance, communication with other taxpayers can alter the perceived strength of social norms against evasion, or people's perceived prevalence of evasion in

their social environment. Taxpayer communication is also a likely vehicle for learning about tax laws, sanctions, and the likelihood of being audited. As well, communication with other taxpayers may alter one's perception of fairness by hearing how other people benefit or are disadvantaged by tax policy or tax administration practice. All of the factors described above are potential mechanisms by which communication can affect tax compliance attitudes and behavior. However, two particular mechanisms have received marked attention in past research: (1) communication affects compliance via altering taxpayers' perception of deterrence factors (level of sanctions and probability of audits) and (2) communication affects compliance via influencing perceptions of social norms; we review some of these results below.

In one of the first studies focused on taxpayer communication, Stalans et al. (1991) surveyed over 1000 US taxpayers to understand whom taxpayers talk to about tax, what is the content of this communication, and what are the implications for compliance. They found that people with higher opportunity to evade (e.g., paid cash-in-hand, having rental income, etc.) communicate about tax more often than those with lower opportunity. While taxpayers communicate with both family and co-workers, these sources serve very different functions. Those who communicate often to co-workers about the tax system report that they would feel less guilty if they evaded taxes, in particular if they perceive themselves to be similar to their co-workers. The authors interpret this finding as taxpayers communicating about techniques to evade tax and escape detection; in turn, such communication undermines the strength of moral norms against evasion. An opposite effect occurs for taxpayers who report discussing the tax system with family – the more often such communication occurs, the more people report they would feel guilty if they evaded taxes. The family setting, the authors argue, is where communication about taxpaying moral norms occurs; rather than communicating about detection rates and evasion opportunities, families are more likely to communicate disapproval for evasion and actively influence family members to obey norms.

Communication does not only affect attitudes towards paying tax, as found by Stalans et al., but also compliance behavior. Rincke and Traxler (2009) analyzed a database of registrations to pay TV licensing fees in Austria. Potential evaders had recently been visited by enforcement officers; what was remarkable is that officers' visits did not only increase compliance in the households they visited, but also led to a third additional unsolicited registrations. Using location data of households, the authors show that the additional unsolicited registrations were partly due to word of mouth among neighbors. They argue that people talk to their neighbors about the visits they received from enforcement officers, and as such the neighbors update their perceptions of likelihood of being caught evading TV licensing fees and choose to register voluntarily.

While communication may affect taxpayers' perceived risk of being caught, as Rincke and Traxler (2009) argue, it is also likely to influence the strength of social norms, as social norms are often more effective in social groups when members have the possibility to communicate (Ostrom, 2000). In a laboratory experiment looking at tax compliance, Alm, McClelland, and Schulze (1999) arranged for participants to play a 'tax game' with realistic audit and penalty rates. When experimenters proposed to the experimental group that a higher level of enforcement should be introduced, participants were allowed to vote in order to accept or reject greater enforcement. Initially, participants voted to reject greater levels of enforcement and, after each such rejection, compliance levels fell. The authors proposed that participants interpreted the rejection vote as a signal that compliance is not valued by the group (i.e., that there is no social norm in support of compliance), and thus their compliance levels fell. However, in some of the rounds, participants were allowed to communicate before voting. When allowed to communicate, they voted in favor of increased enforcement, and following the vote outcome, compliance levels rose to approach full compliance. The authors interpret these results as demonstrating the importance of communication to ensure the effectiveness of social norms.

In summary, two main mechanisms are identified in past empirical research that explain why people's communication about tax may impact on their compliance: the exchange of information

about audits and penalties, and perceptions of social norms. As mentioned earlier in the section, there may be other mechanisms to account for the effects of communication on compliance that have not received as much attention. For example, through communication people may learn about tax regulations, they may alter their perceptions of fairness about the tax system, etc. These different mechanisms may be more or less influential for particular taxpayers and particular situations. In the following section, we narrow the focus of the analysis to one particular setting for tax communication relevant for this research: communication in occupational groups.

2.2. Communication in Occupational Groups

In the current study, we focus on taxpayer communication in a particular type of group: the occupational group. A number of past works have stressed the primary role of occupational groups in taxpayer communication and tax compliance. The socialization of individuals as members of a particular occupational group introduces them to the taxpaying culture of their profession or business sector (Adams & Webley, 2001; Ashby & Webley, 2008; Ashby, Webley, & Haslam, 2009). Furthermore, people belonging to the same profession will be subject to similar tax regulations and obligations (Sigala, Burgoyne, & Webley, 1999), similar evasion opportunities (Stalans et al., 1991), and are likely to interact and exchange information on a daily basis (Ashby & Webley, 2008). As such, a number of past tax compliance studies have focused on communication among members of the same occupational group. Sigala et al. (1999) interviewed self-employed individuals aiming to understand communication content and its impact on compliance. Many taxpayers reported talking to others about income tax rules because they were unsure about what the correct regulations are; some also reported talking to others about evasion opportunities, but also the personal responsibility to pay the correct amount of tax. They reported being more likely to discuss income tax with others of the same profession, and to be influenced by the taxpaying norms of their profession. Interestingly, while some interviewees talked about their discussions regarding income tax, many considered income tax to be an intimate and sensitive topic of conversation that they would rarely discuss with colleagues. Sigala et al. consider this reluctance to discuss income

tax as particular to UK taxpayers, and stress that tax communication research should be mindful of the social and cultural context in which communication occurs. Ashby and Webley (2008) have also looked at how interaction with those in the occupational group relates to tax compliance, focusing on a particular business sector: the hairdressing/beauty industry. Their interview findings reveal that hairdressers and beauticians talk to colleagues in order to clarify tax rules and regulations in their industry, and discuss how others in their industry comply with these rules (e.g., whether they declare tips, when is it appropriate to accept cash-in-hand, etc.). During their training and subsequent employment, hairdressers and beauticians are socialized in the particular taxpaying culture of their business sector; furthermore, frequent contact with others in the profession influences them to comply with the taxpaying culture of the occupation.

Some of the dynamics of communication in occupational groups described above are captured by Hashimzade, Myles, Page, and Rablen (2013) in their model of taxpayer behavior. The authors proposed a model that explains how communication among taxpayers leads to the emergence of attitudes and beliefs regarding tax compliance, attitudes and beliefs that are specific to particular business sectors. In their simulations of taxpayer communication, they assigned agents to either employed or self-employed status of two separate business sectors. Agents are most likely to communicate to others within their business sector, and through communication they update their (a) perceived risk of detection, based on who has been audited in their sector; (b) the value they place on compliance norms – meeting compliant taxpayers will reinforce norms, while meeting noncompliant individuals will weaken the social norm. Ultimately, the model describes how different business sectors develop and maintain specific taxpaying cultures. This simulation study also illustrates how multiple mechanisms involved in tax communication (i.e., perceptions of audits and perceptions of social norms) can influence compliance concomitantly.

2.3. Communication and Social Influence – a black box

As described above, previous research looking at tax communication has provided evidence that communication affects attitudes towards paying tax and compliance behavior. However, for the

most part, these studies make *untested assumptions* about the process that explains why communication with other taxpayers affects people's behavior. For instance, Stalans et al. (1991) found an association between the time spent discussing tax with co-workers and compliance attitudes; they proposed that people talk to co-workers about ways to evade and escape detection, and this in turn lowers their compliance attitudes. (Rincke & Traxler, 2009) proposed that people are likely to comply after communicating to others who were audited because this increases their perception that they could be audited as well (a similar mechanism of updating the audit probability following communication is described by Hashimzade et al., 2013). Alm et al. (1999) found that participants in a tax experiment increased their compliance following communication, and proposed that the increase is due to group members having a chance to clarify the costs and benefits of paying tax, resulting in increased cooperation. However, none of these studies have looked in-depth at the processes that occur during taxpayer communication. For instance, while a study may propose that people update their perceptions of social norms during communication, there is no account of what types of messages people would send in order to communicate norms. Is it that people explicitly state 'our norm here is to be cooperative', or do they communicate norms by expressing disapproval towards free-riders, or do they perhaps use other more subtle or implicit ways to communicate norms? We believe that in order to have an in-depth understanding of the processes that occur during realistic taxpayer communication, a more fine-grained analysis of these processes is necessary. Therefore, our primary aim is to investigate realistic taxpayer communication in order to understand its nature and content, and explore how taxpayer interaction may ultimately effect compliance.

3. Current Study

3.1. Theoretical framework - Communication and interaction

In order to investigate in detail interactions between taxpayers and how their communication might influence their compliance attitudes and behavior, we employ a theoretical paradigm

specifically deigned to research communication in interaction - *discourse analysis* (Potter & Wetherell, 1987). Originating in psychology, discourse analysis is concerned with how people use communication to perform certain social actions (see also Potter, 2012; Wiggins & Potter, 2008). Discourse analysis is a theoretical approach – a framework that places communication at the heart of understanding human behavior. Through communication, people do not simply convey information; their communication performs a function, for example to request, to apologize, to persuade, to defend, etc. Discourse analysis is not just concerned with what people say, but also with the consequences of people’s communication for the social interaction between them. Let us consider an example from our dataset. Here, a young taxpayer asks a question about income tax online: *“I have been doing design competitions now on websites and have built up quite a nice amount of money. But my dad is [...] saying that I really need to stop or the IRS will come after me”*. In this example, the father does more than just convey information (that the IRS will audit his son), he uses language to persuade his son to perform a certain action (‘stop it’) and to issue a warning (‘the IRS will come after [you]’). Discourse analysis does not stop at analyzing what is communicated, but is concerned with what people *do* through communication, and how they attempt and succeed in influencing others.

The discourse analytic approach is particularly pertinent for filling a significant knowledge gap in the literature concerning tax communication: it can help us understand what exactly is it that taxpayers talk about, but more importantly it can help describe the process by which they manage to influence others to comply. For instance, Alm et al. (1999) posited that taxpayers’ communication helps them achieve greater cooperation though strengthening cooperation norms. But what is it that they say to communicate such norms? How do some group members manage to influence others to be more cooperative though the communication of norms? Similarly, Stalans et al. (1991) proposed that family members are likely to influence taxpayers to comply with tax obligations via moral norms. What is it that family members say to influence taxpayers? What kind

of arguments do they use to appeal to moral norms, and when are these arguments successful? In this study, we will employ a discourse analytic framework to answer such questions.

We discussed above one current gap in the tax communication literature: the lack of empirical evidence regarding the process by which taxpayers' interaction affects tax compliance. A further gap in past research is related to the nature of communication. Much of the research reviewed earlier perceives taxpayers as passive transmitters and recipients of information. Taxpayers are seen to communicate objective social norms, audit rates, or sanction levels. However, as shown above, people actively use such 'objective' information to achieve certain functions. Let us consider another example from our dataset. Here, a person communicates to another person that has just said they have not registered with the tax authority despite starting to trade services; they say to the noncompliant person: *"If you are not paying tax then it is only a matter of time before they catch you and take back what you owe."* If we think about this statement in a paradigm where taxpayers communicate their beliefs about possible audits, we might infer that the person is communicating that they believe the probability of an audit to occur is 100%, and that they pass on this information (such as in the model proposed by Hashimzade et al., 2013). However, it is not the transmitter's intention to discuss the perceived audit rate; their intention is to influence the noncompliant person by issuing a threat (Hepburn & Potter, 2011). In order to understand how social influence occurs in tax discussions, we need to employ a method that takes into account the social nature of these discussions and the agency of actors. So far, we discussed the agency of the person communicating about tax. At the same time, the communication recipient has agency to reject or accept the communication content. For instance, one of the taxpayers interviewed by Ashby and Webley (2008) pointed out that many people in her profession told her they accepted cash-in-hand payments to evade taxes, but that she was unsure to what extent this was merely bravado on their part. Taxpayers are not passive recipients of communications from others, they judge and accept or dismiss these communications. By using the discourse analytic framework, we can go beyond

the surface level of what is being communicated and investigate what is being communicated implicitly to provide a more in-depth level of analysis.

Over the last few decades, discourse analysis has been employed to study a range of topics, from the theoretical study of social actions (e.g., apologies, providing accounts, threats and warnings, etc.) to communication and interaction in institutional settings (child protection, courts of law, patient-doctor interactions, etc.) (for a review, see Wetherell, Taylor, & Yates, 2001). However, this study is the first employment of the framework to look at tax compliance research. To clarify our focus, discourse analysis as used in this study originated in social psychology (Potter & Wetherell, 1987) and has distinct features and focus from a host of other approaches that, confusingly, share the name ‘discourse analysis’ (for an overview of discourse analysis approaches, see for instance Van Dijk, 2011). Discourse analysis as we employ it in the present analysis (sometimes described as discursive psychology to distinguish it from other approaches, see Hepburn & Potter, 2006) is concerned with how people perform certain actions through communication, as discussed earlier. Many discourse analysts work primarily with naturally-occurring data (such as phone conversations, television interviews, etc.; Hepburn & Potter, 2006; Wooffitt, 2005). In this study, we analyze naturally-occurring conversations in the form of online discussion about income tax.

3.2. The current study

In order to study how people talk about tax in a realistic context, we chose to focus on naturally-occurring online discussions. Because we are interested primarily with how communication occurs between people of the same profession, we chose to look at discussions that occur on online forums dedicated to professionals. In particular, we chose to look at two forums for web designers as our focus occupational category. We chose this particular category for two reasons: first, because many web designers are self-employed (and thus have to voluntarily report income tax), and second, because this population is most accustomed to communicating online, which we thought would provide extensive data sources. The two online forums were *not* focused on tax, but general

forums for web designers, where people discuss a variety of topics, from techniques involved in web design to how to start and run a web design business, including tax obligations. We selected a number of discussions and analyzed them in order to understand how people communicate about tax, and how they influence each other's compliance intentions. We describe below the criteria for selecting particular discussions and the method of analysis.

4. Sample and Method

4.1. Data collection

The two online forums selected for data collection represent two of the largest online communities for web designers. Most of the discussions on these forums are technical (related to web design), but topics discussed also involve advice on how to start and run a web design business. As part of the legal obligations of running a business, forum users also discuss tax obligations, although these posts are a very small minority of the topics discussed on the forums. Although tens of thousand of users participate in the forums, the proportion of questions relating to business management is around 1%, with the proportion of questions particularly focusing on taxes being even lower. In order to be able to post comments, users have to be registered as forum users (but do not have to publicly display any identifying information, such as name or email address). All the information posted is publicly-available - the reader does not have to register in order to have access to the forum posts. Data were collected in September-October 2013. We began by selecting all the conversations on these forums that contain the word 'tax' in order to be as inclusive as possible. We collected discussions that were as old as 2006 and up to the date of data collection, so the discussions spanned over seven years. Initially, a total of 188 discussions were collected.

Of the larger number of discussions about tax on the two forums, we chose to select one particular type: discussions that begin with a novice asking for income tax advice. These discussions were particularly interesting because novices were faced with specific compliance decisions (to register or not with the tax authority, to fully declare their income or not). The conversations included represent about two thirds of all conversations about tax on the forums. Discussions that were not

selected were typically among more experienced business owners and concerned technical matters (e.g., specific rules for overseas work, rules concerning regional sales tax, etc.) and did not seem to involve any compliance decisions, and therefore were not directly relevant for our research aim. We therefore selected all the discussions involving a novice asking for tax advice, in total 83 discussions from the two separate forums; these discussions are publicly available and did not require the researcher to register as a forum member. To provide an example, a discussion thread of the type we selected begins with the following question: “*Hi guys, just curious, do any of you declare your income to the revenue? I'm based in the UK and just wondering about the rules around making money over the internet*”. This initial question is followed by a number of responses from various forum users, and subsequent discussion about topics such as what the rules are, what constitutes noncompliance, attempts to persuade those facing a compliance decision to comply, etc. Some conversations involve tens of users and many replies, while others may be very short and only include one or two replies. On the whole, conversations have an average of eight replies and six users involved.

4.2. Selection of interaction pairs

As mentioned previously, we are interested in taxpayer interactions. To analyze these interactions as they unfold in communication, we draw on previous work in discourse analysis (Wetherell et al., 2001) and the methodological toolkit of conversation analysis (Hutchby & Wooffitt, 2008; Sacks, 1995; Schegloff, 2007). Conversation analysis has been generally applied to synchronous face-to-face communication; however, it is also a very useful tool for analyzing online communication. Although communication on forums poses particular challenges, such as the fact that communication does not occur in real-time and has a high degree of anonymity, conversation analysis has been applied successfully to online forums (for discussions, see Antaki, Ardévol, Núñez, & Vayreda, 2005; Herring, Barab, Kling, & Gray, 2004). Conversation analysis is employed by discourse analysts to analyze social interactions as they occur in every-day conversations; an important object of analysis is the *adjacency pair* – a pair of utterances in conversation in which people take turns performing certain actions (e.g., greeting-greeting, threat-compliance, apology-

acceptance, blame-defense, etc.). To perform conversation analysis by analyzing the nature of these adjacency pairs, we selected from the 83 discussions of novices asking for tax advice a dataset of 120 interaction pairs. For example, the pair illustrated below is a small selection of a more extensive online discussion, but forms one of the 120 interaction pairs selected for the analysis:

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User 1: Do I need to pay tax from my freelance services? I'm not at the moment.  
Lol [laugh out loud]  
User 2: You have to register with the revenue in the first 3 months of selling  
[...]
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Since we are ultimately interested in this study in how taxpayer communication relates to compliance, we focused on those interactions that may present implications for compliance. The 120 interaction pairs were selected for analysis based on one criterion: that they seemed on first reading to have implications for tax compliance (for instance, because people were given tax information, because they were being persuaded or threatened to pay tax, because they were told about audits or penalties, etc.). The interactions that were not included were either not tax-related (for example, many discussions that began as tax-related also included debates about the need to employ an accountant) or were strictly concerned with debating the accuracy of information given by other posters, with no relation to tax compliance.

4.3. Method

In analyzing the data and refining the categories of interaction, we used a bottom-up approach grounded in the empirical content of the discussions (see Wetherell et al., 2001). Our data analysis method draws on other applications of discourse analysis to social psychological topics. The approach is *not* hypothetico-deductive as is commonly employed in economics and social science research, but is rather aimed at *exploring* the data in detail in order to reveal patterns not previously known (for an overview, see Potter, 1998). After selecting the interaction pairs for analysis as described above, we began by ‘coding’ the content of these interactions. Put simply, this is a process of assigning labels to the 120 interaction sequences selected for analysis based on the meaning of actions performed by the speaker, e.g., ‘question’, ‘apology’, etc. This initial coding

process is cyclical and is revised during several iterations of coding the dataset. During this stage, interactions that are similar are grouped together, and categories that are too wide are separated into smaller categories. Finally, the categories identified were subjected to general validation criteria (see Potter, 1998), such that: (i) our interpretation is consistent with the speakers' own construal of the phenomena (e.g., that our assignment of statements as 'threat' are also construed as such as reacted to by the threatened person), (ii) our analysis involves finding commonalities but also deviant cases that indicate the existence and boundaries of a certain interaction pattern (we discuss deviant cases in the presentation of results), and (iii) consistency with previous analyses of the linguistic structure of interactions (e.g., the lexical structure of normative statements, threats, etc.). Only those categories that contained enough instances to provide evidence of a repeated pattern of interaction were retained. This analysis process led to the identification of five categories of interaction, as reported below in the Results sections.

5. Results

We identified five main categories of interaction in the dataset: (1) giving information, (2) stating norms, (3) highlighting positive aspects of paying tax, (4) direct persuasion, and (5) warnings/threats. Our purpose here is *to describe* these taxpayer interactions, not to quantify them. As such, we will provide a textual qualitative analysis and support this analysis with relevant examples². In this section, we also discuss some immediate theoretical implications of each of these categories; a more general discussion follows in the last section.

5.1. Giving Information

Based on our selection criterion for the discussions, all the interaction sequences began with a novice requesting advice on an online forum for web designers, often regarding registering for income tax, such as in the example below:

² To comply with ethical guidelines, all the comments reported in the analysis have been slightly altered in order to protect the identity of the forum members and their online communities. Should you wish to access the original dataset, please contact the authors.

> I have set up the website, but do I have to do any legal work? Do I have to register my business with the tax man? Or can I just keep going.

This request is often followed by information given by one or (usually) more forum users, typically more experienced at being self-employed or running businesses, providing information such the procedures for registering with the tax authority, the deadline for submission of self-assessment forms, tax rates, etc.

From an interactional perspective (Sidnell, 2009), those who reply to the novice's request for information perform two actions. On the one hand, they provide an answer, giving the required information. On the other, they state the rules, and thus *implicitly request compliance with these rules*. For example, one user accompanies the information given about income tax with:

> [...] which you **must pay.. and on time!!** [original emphasis]

The vast majority of utterances providing information about paying income tax do so in a normative way. They often use verbs such as 'must' or 'should', which communicate an obligation (Palmer, 2001) and are used to request compliance with social norms (Edwards, 2006). Other forum members providing information use equivalent normative expressions such as 'you will have to do a self assessment each year', 'you will obviously need to inform HMRC', 'you definitely have to pay taxes on your income', etc.

In order to further show that this way of communicating tax regulations is normative, but not unavoidable, we present below one of the very few exceptions in the dataset where information about income tax is *not* presented in a normative manner.

> Of course online income is taxable.

Whether you declare it on your tax return is completely up to you.

If you're just earning a few hundred online and it's not really a major income then many people would tell you to just forget it.

This exception strengthens the argument that communicating tax in a normative way (e.g. using 'should', 'must', and generally implying that compliance is expected) is a social practice meant to convey norms, not an unavoidable manner to communicate such information (deviant cases often

strengthen the argument for a normative structure of a given type of communication, Potter, 1996).

The important lesson for tax compliance derived from this linguistic analysis is that people often communicate taxpaying norms in a subtle manner. While it may seem that they merely provide information about rules, the manner in which they provide such information reveals its normative aspect. Keeping in mind that subtle ways of persuasion are often more effective than direct ones (Potter & Wetherell, 1987), such normative communication can have important implications for compliance.

In terms of responses to being given information, often in a normative way, most novices appear grateful (e.g. "Thank you for the helpful stuff guys") and sometimes explicitly express their intention to follow the advice received, such as in the examples below.

1. Thanks everyone, looks like I'll have to make the call then. [after being advised to phone the tax authority]
2. Thank you for all the help. I'm going to keep a tab of all income, and at year end I'll talk to my parents about it. Thanks.

However, alternative responses to receiving information may question the accuracy of the information received or indeed its normative implication (i.e., that they are required to comply with those rules). For instance, in the example below, a forum user is questioning the advice received from another user.

- > You pay class 2 national insurance regardless, and it's around 2.50 a week.
- > Apparently not, on the form it gives me the option to voluntary pay class 2.

In the example below, however, a user has received advice about the income tax rules and their answer is not dismissive of the accuracy of the rules, but of the norm of following the rule:

- > But I don't want to pay it ☹

Questioning the advice received often leads to subsequent discussion. Responses that dismiss the accuracy of the rules or the norm of paying tax often lead to discussion aimed to clarify the rules.

However, when novice users argue the very norm of paying tax, others will respond using a range of more direct social influence techniques, which we outline below.

5.2. Stating Norms

Some users respond to novices' request for information by explicitly stating taxpaying norms. Most often, however, users explicitly state taxpaying norms after the novice has proven not fully compliant with the rules stated, as outlined above. At whichever point in the discussion users explicitly state taxpaying norms, the role of this statement is to reinforce that they subscribe to the norm and that this norm is to be followed. Stating norms is rarely accompanied by any response from the novice.

We include below examples of forum users stating taxpaying norms:

1.

> Do I really have to pay taxes on this income...

> Doing business is good, and paying taxes is part of doing business. Seems simple enough. There's no more to it.

2.

> But I don't want to pay it ☹

> [...] paying tax is part of life. You can't get away from it.

A different manner of stating norms is to explicitly stress that not following the norm constitutes evasion:

3.

> If you're not earning much many people would advise to just write it off.

> What do you mean by 'writing off' income, that's just tax evasion.

This particular action of stating norms in order to produce compliance highlights the important role that social norms generally play in tax compliance (Bobek et al., 2007; Wenzel, 2004a). We cannot tell based on our limited dataset why is it that social norm communication produces tax compliance. On the one hand, stating the norm, as in the example above, could simply appeal to people's propensity to conform to existing behaviors in society (Cialdini & Trost, 1998). On the other hand, it is also possible that by stating social norms, the other forum users stress that they

are contributing to taxes, and that the novice is also obliged to do so based on a norm of reciprocity (Fehr, Fischbacher, & Gächter, 2002). The latter possibility may be apparent in the example below:

```
> You cannot just say you are an independent web designer and still keep all  
the money, it annoys the hell out those who pay their taxes and the tax man  
so everyone involved with the money needs to register otherwise they don't get  
to do business.
```

Accusation of Transgression. It may also be the case that forum users will explicitly state transgressions from norms, in order to make salient to the novice that they are indeed transgressing taxpaying norms, and also that those users do not condone such transgressions. Responses to such accusations are often met with defensive responses denying any intention of transgression.

```
> Looks like you are looking for ways to evade your taxes.  
> I'm honestly not trying to evade, I just don't know much about taxes
```

Positive reinforcement. While transgression is sanctioned (as outlined above), forum users sometimes explicitly reinforce the behavior of those who are compliant, such as in the example below.

```
> I just sold my first website and I believe I now have to pay taxes ... I would  
really appreciate some advice ...  
> It's not often that you'll find a 17 year old asking advice on how to pay  
taxes on income he made. I respect that a lot.
```

The two devices – verbally sanctioning transgression and reinforcing positive behavior – act to strengthen compliance with norms (Cialdini & Goldstein, 2004).

While some novices express compliance when they learn what the income tax rules are or the general norms followed by the community, some who do not display compliance become targets for a variety of persuasion techniques from other forum users, which we outline below. Many of these techniques reflect general methods of social influence (Cialdini & Goldstein, 2004) and varied rhetorical devices (Billig, 1991) that are geared towards achieving compliance.

5.3. Highlighting Positive Aspects of Paying Tax

One of the first such methods of persuasion is appealing to the novice's 'best interest', highlighting all the positive aspects (gains) of paying tax. For instance, reputation as a trader may be enhanced by being registered as a sole trader or business:

> But I don't want to pay it ☹

> At the end of the day I don't like what the government do with the taxes I pay but I know that my reputation increases when I am able to give the client an invoice

Many forum users also point out several ways to mitigate the amount of tax paid in order to convince the novice that the tax burden is not as large as it may initially seem:

> But I don't want to pay it ☹

> [...] Then you can make sure you claim all allowable expenses and you take advantage of legitimate tax savings, like Bonds, ISAs, etc.

5.4. Direct Persuasion

As discussed in the introductory section, an important insight from discourse analysis is that people often say something different than what they mean (e.g., a question such as 'could you give me the glass?' rarely enquires about the interlocutor's capacity or ability to pass a glass; rather, it is a polite version of the request 'give me the glass'). It is particularly true for actions aimed at social influence and control that people prefer to say things in subtle indirect ways (Potter & Wetherell, 1987). However, sometimes direct persuasion is used by forum users, such as illustrated in the two instances below.

1. Do yourself a favor, do things the correct and legal way....you will be glad you did.

2. Just focus on making money and when the tax year ends pay as little tax as you legally can.

There is not much evidence in the dataset regarding how people respond to direct persuasion in this context, since there are no direct answers to the few direct requests present. However, based on existing literature on social influence (Cialdini & Goldstein, 2004), such direct request are likely to be less persuasive than the more indirect and subtle methods of influence described above.

5.5. Warnings and Threats

The final category of taxpayer interactions identified in the dataset is that of warnings and threats. Although these actions have distinct features (warnings are related to the potential actions of an external source, while threats are within the power of the person issuing the threat to enforce, see Hepburn & Potter, 2011), their distinction is blurred in the case of tax compliance communication and we will collapse the two into a single category.

Non-specific warnings and threats. Many of the threats made to noncompliant individuals are not accompanied by any specific consequences for noncompliance, such as the examples below illustrates.

1. That's tax evasion [...] you could be in for a world of hurt.
2.
 - > ... I think you don't have to pay taxes if you were paid by cheque.
 - > ... You should NEVER mess around with the tax office - they will have your hide for their boots.

As the second example demonstrates, these non-specific threats are not meant to communicate specific penalties, but rather to intimidate and construct an image of the tax authority as highly powerful. This general threat attempt points to the deterrence effect of the perceived power of the tax authority (Hofmann, Gangl, Kirchler, & Stark, 2013), as one forum user points out *'you never want to be on the wrong side of [...] HMRC [UK tax authority]'*.

Penalty warnings and threats. Some warnings and threats specifically refer to penalties for evasion. Most of these refer to monetary penalty, while very few mention imprisonment as a potential outcome of evasion. As above, many of these threats are not specific as to the exact penalty amount, and seem rather geared towards instilling fear than communicating the objective penalty level:

1.
 - > ... So what do I need to do to avoid getting into trouble and keep the most money?
 - > ... And don't believe the IRS will let you get away with it for long, they won't, and the penalties will be catastrophic.

2.

> ... Can small income be considered gifts if parties agree to it? And if someone paid me \$500 but both parties agreed not to report it?

> It really sounds like you are asking to go to jail.

A minority of comments, however, do discuss penalties in terms of a cost-benefit analysis, arguing that it is not economically advantageous to evade:

> I'm not going to pay anything before I get a job or do this fulltime. I'm not declaring income from selling a site once in a while.

> For anyone planning on not paying taxes note that the tax man can investigate as far back as six years [...] so while it may seem like you've not been caught, they will eventually find you out so it's certainly worth declaring even if you don't really want to.

Audit warnings and threat. The vast majority of audit threats seem to advance a 100% audit probability, in other words they communicate that it is unavoidable to be caught if evading.

> There's no way of them finding me, [name removed] isn't my real name.

> If you're evading tax, as you previously admitted, then they will certainly find you and recover what you owe.

There is a single comment in the dataset that discusses what they see as the objective probability rate.

> Statistically the possibility of being audited is about 1%. Get the hint?

Again, the exception suggests that it is normative to discuss audit in the context of certain audits (e.g. 'sooner or later they will catch up with you'), rather than to discuss specific audit probabilities.

While a small minority of these communications suggests that people discuss penalty and audit probability in the context of analyzing the risky opportunity of evasion (Allingham & Sandmo, 1972), most of the mentions of penalties and audits seem rather meant to instill fear in order to achieve compliance .

Reputation warnings and threats. A small number of comments also point out the reputation loss as a professional if individuals evaded tax, reflecting theoretical models that have included

reputation concerns as costs of tax evasion (e.g., Allingham & Sandmo, 1972; Myles & Naylor, 1996):

- > I'm not going to pay anything before I get a job or do this fulltime. I'm not declaring income from selling a site once in a while.
- > ... You could also cause grief for your clients because they could be asked to pay your tax (as if they had paid you net) if they didn't check if you have registered to handle your own tax.

Interestingly, while other social influence strategies discussed here elicited moderate compliance responses from novices, threats and warnings seem to elicit the most defiant responses, especially when they refer to the coercive power of tax authorities. For example:

- > The taxman has internet access you know.
- > There's no way of them finding me, [name removed] isn't my real name. They don't know anything about me.

These results are consistent with theory showing that people are more likely to be influenced by subtle, indirect forms of persuasion, while they may be more reluctant when directly told what to do, especially when faced with powerful coercive authorities (Cialdini & Goldstein, 2004).

In the dataset, some of the interaction categories identified were more common than others. The use of warnings and threats was the most common persuasive strategy, followed by normative information giving, while direct persuasion was least used. It is important to note that our data is drawn from a particular communication medium (online forum) and from a particular professional group, and that the frequency of use for these strategies may be very different in another setting. It is also worth noting that the most commonly used strategies are not necessarily the most effective. On the contrary, as discussed above, threats seem to provoke the most defiant responses, while strategies such as stating norms or the benefits of paying tax seem to elicit the most cooperative responses. While we have no access to forum members' actual behavior, there is evidence that cooperative stances are associated with compliance, while defiant stances with non-compliance (Braithwaite, 2009). Therefore, while some social influence techniques may be used

more frequently by forum members, there is no reason to assume that the more common techniques are more effective or more acceptable.

[Insert Table 1 here]

6. General Discussion

A number of studies over the last two decades have looked at taxpayer communication, aiming to understand how taxpayers change their behavior following interaction with other taxpayers (Alm et al., 1999; Ashby & Webley, 2008; Hashimzade et al., 2013; Rincke & Traxler, 2009; Sigala et al., 1999; Stalans et al., 1991). However, as valuable as some of these results are in showing that communication does matter for tax compliance behavior, they do not provide a clear account of *how* compliance decisions change during communication with other taxpayers. Our study offers the first investigation of naturally-occurring discussions among taxpayers to provide empirical evidence of what is being communicated, how, and with what potential consequences for tax compliance.

6.1. Social influence and persuasive messaging in tax communications

Many past studies have regarded actors in tax communication as passive transmitters and recipients of information; for instance, taxpayers may spread information about how to evade and escape detection (Stalans et al., 1991) or about audit rates in their network (Hashimzade et al., 2013; Rincke & Traxler, 2009). However, our analysis reveals very different processes taking place in taxpayer communication – taxpayers seem to actively influence and persuade other taxpayers to comply with tax laws (and in a very small number of cases, not to comply). Many of the types of interactions we looked at represent active attempts at social influence, and employ a range of known persuasion techniques (Cialdini & Goldstein, 2004). *Therefore, an important contribution of our study to the compliance literature is to highlight and provide evidence of social influence processes in tax communication.*

While recent literature surveys have stressed the important role of social norms and peer effects (Hashimzade, Myles, & Tran-Nam, 2013; Kirchler, 2007; Pickhardt & Prinz, 2013), the vast majority of studies following this line of research have focused on the individual compliance decision in a social context of existing norms and practices. Past taxpayer surveys have shown that social norms of compliance are prevalent in many countries (e.g., Barham & Fox, 2011; Beers, Nestor, & San Juan, 2013), and that such norms are related to higher reported compliance (Wenzel, 2004b). The process by which these norms are communicated and enforced in taxpayers networks is less clear. As highlighted by behavioral economics advances (Fehr & Fischbacher, 2004; Fehr et al., 2002; Ostrom, 2000), the maintenance and effectiveness of social norms is not only contingent on the decisions of individuals to follow these norms, but on the active social influence of their peers. Any conceptualization of the role of social norms in tax compliance should also take into account these social influence processes. As such, this paper provides empirical evidence of active social influence in a tax compliance setting, paving the way for further research and formalization of such social influence.

Our analysis is descriptive and does not aim to provide quantitative responses to the research questions. However, qualitative analyses such as the present one are essential to enable further quantification. We offer a description of how taxpayers communicate messages about social norms, how they form warnings and threats, etc. Knowing how people formulate these actions, future research can quickly identify such actions in larger and more representative datasets. We highlight below several avenues for further investigation.

Although we provide evidence that taxpayers actively seek to influence other taxpayers through a variety of persuasion methods, given our method and dataset, we cannot make any claims regarding how widespread or representative these processes are. Future **survey research** that looks at social norms may investigate these processes by looking at whether taxpayers actively seek to influence other taxpayers (for instance, by asking ‘How likely are you to attempt to persuade a family member/friend/collage to pay their tax correctly?’). Future surveys could also quantify the

persuasion methods used by asking how the respondent might seek to persuade the other to comply (e.g., ‘by highlighting why it’s beneficial to comply’, ‘by warning them they will get caught’, etc.). While past surveys have focused on measuring the prevalence of social norms (e.g., Ashby et al., 2009; Beers et al., 2013; Bobek et al., 2007; Wenzel, 2004b), none have focused on measuring the respondents’ willingness to communicate or enforce these norms. Such survey insights would not only provide further evidence of social influence among taxpayers, but may highlight whether certain taxpayers (perhaps the more experienced, most compliant, etc.) are more likely to enforce compliance norms by attempting to persuade other to be compliant. On an academic level, these insights would contribute to understanding how social norms are communicated and maintained in taxpayer social networks. On an applied level, such results may indicate that certain types of taxpayers can act as ‘allies’ of the tax authority in communicating and helping maintain compliance norms in their networks (for example, certain types of business owners may be willing to cooperate with the tax authority in educating young entrepreneurs in their business sector).

In social networks of taxpayers, it is likely that certain taxpayers will be more active than others in spreading social norms and that some will enjoy greater influence based on their place in the network (see Scott, 2000). Past **agent-based simulations of taxpayer social networks** have treated agents as homogeneous in regard to their place in the network structure (e.g., Hashimzade, Myles, Page, et al., 2013; Korobow, Johnson, & Axtell, 2007). Understanding which taxpayers are most likely to use influence and be persuasive (e.g., through surveys as suggested above) may aid the refinement of simulating taxpayer behavior in social networks.

Our analysis has also provided evidence that taxpayers employ a variety of persuasion techniques in order to exert social influence on others, and there is some indication that some of these methods may be more acceptable and thus more persuasive than others. **Behavioral experiments** would be well suited to further investigate the comparative effectiveness of different types of messages (i.e., stating of norms, threats, stating benefits, etc.). By introducing taxpayer

communication in a tax compliance experiment, one may observe which persuasive messages are used by participants and investigate the effects of these communications on compliance.

6.2. Discourse analysis in tax compliance research

Our study employs principles of discourse analysis (Potter & Wetherell, 1987; see also Hepburn & Potter, 2006; Wetherell, 1998). Our qualitative analysis does not limit itself to looking at what people say in tax communication (as is often the case with interview studies, e.g. Sigala et al., 1999), but looks at communication as it occurs naturally to highlight the function that communication serves, looking at what is it that people attempt to *do* in communication. While this point might not seem crucial to those unfamiliar with debates surrounding the philosophy underpinning discourse methods, it is essential for the validity of researchers' interpretation when studying communication, in this case communication about tax compliance. For example, as mentioned above, past studies have looked at how people interpret and communicate audit probabilities in social networks (e.g., Rincke & Traxler, 2009). In our dataset, many experienced web developers communicate to novices that they will certainly to be caught if they evade. On the surface of the communication content, we might infer that people believe the audit probability if they evaded to be 100%, and they communicate this probability within their networks. As a consequence, people would become compliant due to the deterrent effect of tax audits (Allingham & Sandmo, 1972). But it is very unlikely that all these developers who have decades of experience running businesses really believe that audits are certain if one evades, it is far more likely that they employ the idea of certain audit for evaders as a persuasion device, with the aim of convincing novices to comply. If we did not pay any attention to what taxpayers do in their speech (i.e., social influence), we might misinterpret the communication situation as passing on beliefs about audits. However, in fact, as we have shown in our analysis, these communications serve to enforce norms and persuade others to comply.

Therefore, interestingly, people strategically use the deterrent effect of tax audits in their discourse in order to enforce social norms. In relation to the tax compliance literature, which has often

considered economic deterrence factors and social norm effects as distinct strands of research (for reviews, see Kirchler, 2007; Pickhardt & Prinz, 2013), we show that the idea of economic deterrents can reinforce social norms in these tax communications. Indeed, this interpretation is consistent with many models of social norms that consider punishment to be essential to the maintenance of norms (e.g., Fehr et al., 2002; Ostrom, 2000). We believe that *an important contribution of our study is to introduce the discourse analytic approach to the compliance literature and offer a more fine-grained analysis of social norms processes in communication than has been offered in the past.*

We hope other researchers will consider discourse analysis for future research into tax compliance. Most researchers using discourse analysis (as employed by psychologists, see Potter, 1998) work with naturally occurring data. In this particular instance, we used discussions on online forums, but future research may look at tax compliance in a range of other online sources (e.g., discussions on all types of social media, user comments to newspaper articles, blogs and other online publications, etc.) and more traditional discourse analysis sources (e.g., transcripts of media interviews, transcripts of board room discussions, tax advice call center transcripts, transcripts of official government inquiries, etc.). As outlined earlier in the paper, discourse analysis is a method of systematic exploration of such datasets to discover new phenomena (for an outline of the method, see Wetherell et al., 2001). Given that such data are not elicited by the researcher, there is potential for in-depth exploration of such naturally-occurring discussions to provide innovative findings regarding tax compliance behavior.

6.3. Persuasive messaging and tax compliance campaigns

Our analysis has not only considered persuasion communications, but also responses to these persuasive appeals. For instance, it has revealed that the most defiant responses occurred when people were threatened by the coercive power of tax authorities, but much more amenable responses occurred to other more subtle forms of influence, such as highlighting benefits of paying tax or stating general taxpaying norms. There is, of course, no way of knowing based on our dataset if more defiant responses would actually lead to lower compliance, but there is evidence that

defiant versus cooperative stances towards authorities have implications for compliance (Braithwaite, 2009). In this study, we rely on people's self-reports of compliance intentions and behavior (e.g., 'I don't want to pay', 'I am not paying at the moment'). Self-reports are central to tax compliance research and are used extensively to assess compliance attitudes and behavior in interviews, surveys, and some experimental studies. Although there is debate of the extent to which self-reports reflect people's actual compliance behavior, self-reports are useful albeit imperfect proxies for actual compliance behavior (for a discussion, see Elffers, Robben, & Hessing, 1992). Although we rely on self-reports in this study, we use naturally-occurring data, which often offer more valid reflections of people's actual behavior than self-reports given in interviews or surveys because they avoid the researcher biasing responses (Wetherell et al., 2001; Wooffitt, 2005). Therefore, statements of compliance given by forum users may serve as indication of actual behavior, and thus may help us understand whether people change their compliance intentions following social influence from others; this would provide indication of the types of messages that seem most effective. *As such, our analysis highlights potential persuasive messages that could be used in media compliance campaigns.* Several authors have proposed media campaigns as effective ways to achieve taxpayer compliance (e.g., Alm & Torgler, 2011; Kornhauser, 2008), but have provided little detail regarding the messages that would be communicated in such campaigns. Analyses of naturally-occurring data, such as the present one, have the potential to highlight messages that are both relevant to taxpayers and prove persuasive, and constitute a starting point to develop campaign messages grounded in empirical analysis. Future research could further investigate the persuasive appeal of messages such as those identified in our analysis and compare their effectiveness in an experimental setting in order to pave the way for constructing public communication campaigns (as discussed previously). Further to informing the types of persuasive messages that could be used in public communication campaigns (e.g., state norms, state benefits, etc.), our study also provides evidence of how people construct such messages lexically and semantically in real-world

communication. Public communication messaging may use these insights to construct persuasive messages that are realistic.

6.4. Conclusion

Overall, this study presents a first attempt in the tax compliance literature to (1) provide an in-depth empirical analysis of naturally-occurring taxpayer communication; (2) provide in-depth insight into social influence processes taking place in such communications; (3) employ a discourse analytic framework, offering a novel methodology in the study of tax compliance.

However, the dataset is limited to one professional category, to the online forum medium (which is public), and a particular type of conversation involving novices of the profession facing compliance decisions. The extent to which we can extend these conclusions to all communication about tax is limited. Therefore, we hope more researchers will provide further in-depth analyses of tax communication, and we strongly believe that qualitative studies (for an overview of qualitative methods in tax compliance, see Oats, 2012) of naturally-occurring data will provide rich insightful analyses of these processes.

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Table 1.

Number of occurrences of each category of interaction in the dataset

Category	Occurrences in the dataset
Normative information-giving	29
Stating norms	17
Highlighting positive aspects of paying tax	10
Direct persuasion	8
Warnings and threats	37

Note: Some interaction sequences contained more than one category, while others contained none.