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The impact of online tax community advice on individual taxpayer decision making

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ABSTRACT

In this study, we examine the impact of advice shared on an online tax community and taxpayer decision making. Online tax communities are linked to major tax preparation software and provide a way for taxpayers to ask unique questions and receive responses. While online communities are intended to facilitate the transmission of unbiased advice between individual taxpayers, the quality, content, and source of responses can greatly vary. Drawing on the predictions of expectancy violations theory (EVT), we investigate two facets of provided advice: response provider expertise and response language concreteness. Our results indicate that taxpayers report more conservatively (more aggressively) when presented with advice from a deemed tax expert if concrete language (abstract language) is used. Further, we find that taxpayers' perceived usefulness of the response mediates this relationship. Collectively, we contribute to EVT and provide evidence on the recognition and use of online tax community responses.

1. Introduction

In 2021, approximately 67.2 million tax returns were self-prepared and e-filed with the Internal Revenue Service (IRS) (2022).[1] Individuals who self-prepare their tax returns do not benefit from the advice of paid experts and must find other ways to gain a better understanding of tax situations, such as through online tax communities.[2] Ambivalent feelings toward professional advice likely push taxpayers to seek freely given advice (Lewis, 2017). Online communities, organized topically, are predominately populated by non-experts voluntarily and anonymously sharing information on tax topics requiring significant judgment. It is unclear who is providing the advice, whether the advice is of high quality, and even if taxpayers utilize the advice. Since taxpayers seeking advice from online tax communities can view advice from multiple other taxpayers, a significant amount of uncertainty can exist pertaining to the presence of deemed tax expertise. Moreover, the psychological distance between advisors and taxpayers seeking information can dictate the language used in communication and, in turn, utilization by taxpayers (Danziger, Montal, & Barkan, 2012; Trope & Liberman, 2010). Therefore, we investigate whether taxpayer advice utilization in an ambiguous reporting decision is impacted by deemed response provider expertise and response language concreteness.

Congress is concerned with protecting taxpayers from external advice and has introduced legislation regarding preparer standards in recent years (U.S. Congress, Committee on Finance, 2015, 2016). In particular, the Senate Finance Committee has examined how the tax

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[1] This figure includes approximately 4.7 million returns filed via the IRS Free File Program. This public-private partnership allows lower-income taxpayers to file their tax return for free using commercially available software. The free version of the software performs similarly to paid versions, albeit with reduced functionality.

[2] Online tax communities, such as Intuit Turbo Real Money Talk, reddit.com/r/tax, and HR Block Community, publicly provide free tax advice on a range of topics. Communities are comprised of tax experts, "power" software users, and other individual taxpayers willing to publicly share tax advice (TurboTax, 2017). Organized topically, tax communities are predominately populated by non-experts voluntarily and anonymously sharing tax information. Online tax communities are distinct from other communities since taxpayers are not looking for a collection of similar or related advice but rather the best answer that results in the most appropriate tax action. Individuals generally have a strong negative affective reaction to paying taxes, impacting decision making and the search for and reliance on external information (Gray, 2015; Moreno, Kida, & Smith, 2002). Taxpayers are likely motivated to search for advice on a tax community that minimizes taxes owed without changing perceived audit likelihood.

preparation industry is able to protect taxpayers from incompetent and unethical tax return preparers (U.S. Congress, Committee on Finance, 2014). With the dissolution of the IRS' Registered Tax Return Preparer (RTRP) program (Loving, 2014), paid preparers are no longer subject to governmental testing and CPE requirements. Thus, taxpayers can be exposed to paid and free tax advice of varying quality. Online community advice can provide accessible, low-cost information to taxpayers, necessitating investigation into the factors that lead taxpayers to implement tax advice.

To examine the impact of online tax community advice on individual taxpayer decision making we utilize a 2 × 2 between participants experimental design manipulating response language concreteness level (abstract/concrete) and response provider expertise (deemed expert/non-expert). Individual taxpayers are presented with an uncertain position on claiming an educational tax credit, specifically the Lifetime Learning Credit (LLC). Participants are asked to determine the amount of tax credit they are eligible to claim based on a list of educational expenses and other provided information. Online tax community advice is then provided before participants make a final decision on how much credit they will report. Based on prior literature investigating expectancy violations theory (EVT, Burgoon & Hale, 1988; Burgoon & Burgoon, 2001; Burgoon, 2015; Clor-Proell, 2009) and the construal level literature surrounding language concreteness (Trope & Liberman, 2010; Weisner, 2015), we predict that providing tax advice at a concrete (abstract) level and stating that it is provided by a deemed tax expert, will result in taxpayers using the advice to a greater (lesser) degree. Advice provided by an expert that is specific in nature, explaining what expenses qualify in the scenario, can help confirm expectations of online advice, whereas an expert who provides a high-level response can create an expectation violation, possibly reducing advice reliance. We further posit that popularity, reflecting heuristic processing, and perceived usefulness of the response, reflecting systematic processing, are also expected to mediate the relationship between expertise, concreteness, and advice utilization.

Using 185 participants recruited from Prolific, proxies for U.S. individual taxpayers, we find evidence that participants' decisions are affected by response deemed provider expertise and response language concreteness on an online tax community. Specifically, we find that a response provided by a perceived expert using concrete language results in higher advice utilization and more conservative tax reporting in our tax credit scenario than if the response was conveyed in a high-level manner. Further, we find that abstract language used when there is a deemed tax expert results in less advice utilization, consistent with EVT and the creation of an expectancy violation. Additionally, we find that popularity does not appear to mediate this relationship while response usefulness does, suggesting that taxpayers use systematic processing when considering free advice from a tax community. There appears to be a purposefulness in seeking advice from an online community, in contrast with casual social media interactions (e.g., viewing posts on Twitter).

This study contributes to the literature on EVT by investigating individual taxpayer decision making where initial expectations are subject to expectation violations through the tax reporting process when presented with online tax community advice. How information is presented can have a substantial impact on taxpayer advice utilization. This reliance, in turn, can lead to the adoption of aggressive or misinformed tax positions. While in our context greater advice utility yields more conservative reporting, through the amount of tax credit claimed, there can be significant tax ramifications from the adoption of aggressive tax positions. Further, this study builds on the advisor literature by examining a context where communication abstraction could lead to rejection of advice, even if it comes from an expert (cf. Reyt, Wiesenfeld, & Trope, 2016). Our study provides an understanding of how tax advice is selected for use and integrated into decision making when information searches lead to online tax communities. We focus on the linguistic communication from advisors and whether the advice platform indicates expertise to determine the effect of advice utilization.

Practically, this study contributes to the understanding of individual taxpayer compliance decisions. Using online tax community advice in situations where there is uncertainty can have a significant incremental effect on taxpayer decision making. As such, our study provides evidence to regulators and policy makers, including Congress and the IRS, about the impact of unmoderated tax communities created by the tax preparation industry. How taxpayers interact with readily accessible online communities could impact interactions with tax software. Further, undue reliance on so-called tax experts could signal the need for greater concern and constraint surrounding tax community attributes. Our results give rise for further regulator questioning about the pervasiveness of online communities and whether regulation is needed to account for advisors on these platforms.

The remainder of the paper is as follows. Section 2 describes prior research examining the theoretical underpinnings, online communities, and communication concreteness and develops the hypotheses. Section 3 describes our research design while Section 4 describes the results. Section 5 concludes.

2. Prior research and hypothesis development

2.1. Online communities

Online communities are distinct from social media platforms. Unlike social media, where individuals share thoughts rather than knowledge for self-benefit, in online communities individuals share solely for the benefit of others. Individuals in online communities share information in the presence of a community interest or when there is a moral obligation (Lin, Hung, & Chen, 2009). Some experts view online question and answer platforms as a valuable learning resource while others are concerned with the quality of instruction, participant discretion, and the correctness of information disseminated online (Kim & Oh, 2009; Wasko & Faraj, 2005). Users engage in sharing in virtual communities for many reasons including altruism, learning, maintaining competency (Nam, Ackerman, & Adamic, 2009), or for the functional, psychological, and social benefits they can provide (Parra-López, Bulchand-Gidumal, Gutiérrez-Taño, & Díaz-Armas, 2011). Moreover, users participate in these platforms to form structural, relational, and cognitive ties to their field where these dimensions help influence information quantity as well as quality (Chiu, Hsu, & Wang, 2006; Nahapiet & Ghoshal, 1998). Online community members are more inclined to follow given advice if community trust is readily apparent (Casaló, Flavián, & Guinalíu, 2011). Casaló et al. (2011) note that recommendations provided on virtual communities are found to be more trustworthy and useful because the user believes the information source has little to gain from the user's subsequent actions.

TurboTax created the first of its kind social community, AnswerXchange, to allow individuals to receive personalized and "unbiased" answers to Affordable Care Act questions (Business Wire, 2013; TurboTax, 2017). On the AnswerXchange platform, question attributes determine content popularity (Podgorny, 2016). Online tax communities do not guarantee the quality of answers, often leading individuals to resort to the wisdom of crowds (Shah & Kitzie, 2012).[3] Nevertheless, users consistently and voluntarily share their knowledge in online tax communities with others despite the lack of performance incentives (Chai & Kim, 2010; Chiu et al., 2006; Chiu, Wang, Shih, & Fan, 2011).

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[3] Online tax communities have even been developed for tax professionals including Intuit ProConnect Tax Pro Center, AccountingWEB, and the AICPA LinkedIn Group (Hammer, 2016). Even in professional settings, having to sort through and assess a larger volume of lower quality responses can negatively impact answer seekers. For instance, Culver, Gerr, and Frumkin (1997) find that medical information available in online discussion groups predominantly come from nonprofessionals based on limited or inappropriate evidence.

The rise of online tax communities mirrors increasing tax law and filing complexities. As it becomes more difficult for taxpayers to complete their own tax returns, there is a growing need for free tax advice.

Online tax communities are similar to social media platforms for corporate disclosures where users can share their thoughts which are accessed and consumed by other users (e.g., Kipp, Zhang, & Tadesse, 2019); however, the two platform types have vastly different objectives. An online tax community is an advice sharing platform that allows users to seek and find answers for tax-related issues, whereas a social media platform is a marketing channel that allows firms to disseminate messages to stakeholders. The individual income tax system results in piecemeal incentives that reward the individual taxpayer for successfully taking aggressive tax positions, while offering no explicit rewards to experts and non-experts who freely provide tax advice.[4] Intentions to share in online communities are positively influenced by trust in other responders and the service provider beyond any economic benefits associated with sharing (Chai & Kim, 2010). Additionally, unlike other communities focused on software self-help support or travel planning, the government is indirectly involved in an individual's tax decision-making process. Tax enforcement related anxiety could drive advice seeking and reliance (Friedberg, 2018).

These platforms maintain an unclear picture as to who is really an expert in an online tax community, as online profiles are not often linked to real identities. For example, VolvoGirl is marked as a "SuperUser" on the TurboTax AnswerXchange platform and has provided over 66,000 answers resulting in over 108,000 helpful votes without providing any personally identifying information.[5] Designations such as "SuperUser", "TaxPro", or number of helpful votes could guide perceptions of advisor expertise even if the response provider does not have an educational background or prior work experience relating to taxes. Given complex tax situations, the extent that individual taxpayers utilize advice could depend on the clear presence of deemed expertise and how the advisor communicates (e.g., Bonaccio & Dalal, 2006; Dalal & Bonaccio, 2010). Further, perceptions of advice quality could greatly depend both on the type of language used by an advisor as well as the setting where the advice is available (Reyt et al., 2016).

2.2. Advice and expectations

Advice provides a basis for expanding domain knowledge, recalling examples of outcome knowledge, or reducing excessive uncertainty by providing a minimum level of guidance (Sniezek, Buckley, & T., 1995).[6] Outcome knowledge, for instance, can inform individuals about the risk associated with taking an aggressive tax position (O'Donnell, Koch, & Boone, 2005). Solicited responses to user questions could contain advice suggesting the use of aggressive or misleading positions. Although the presence of solicited advice does not directly lead to advice utilization, the interaction between individual taxpayers and advisors in addition to the overall lack of technical tax knowledge of individual taxpayers suggests that online community advice will be used to some extent (e.g., Bonaccio & Dalal, 2006).

The complexity of the tax code could motivate individuals to seek advice, both free and paid in uncertain situations. Taxpayers turning to online tax communities for advice likely perceive the functional benefits

of the platform to outweigh the costs with soliciting advice from unknown others. Moreover, ambivalent feelings toward professional advice could push taxpayers to seek advice freely given, at least initially (Lewis, 2017), while tax enforcement related anxiety could drive advice seeking and reliance (Friedberg, 2018). However, the extent to which taxpayers rely on the advice provided by others is apt to depend on their trust in the online community, qualifications and quality of advice, and the characteristics of advisors (Casaló et al., 2011). Within a tax community, platform reputation, whether an advisor is perceived to have expertise, and whether an advisor has an incentive to provide certain information could impact the degree to which advice is utilized.

Advisors often provide guidance using abstract language as they are more psychologically removed from the issue at hand and focus on idealistic considerations as opposed to pragmatic ones (Danziger et al., 2012). Such advising approach follows prior construal level literature where those able to distance themselves from a situation can consider an issue at a higher level by using abstract language, while individuals involved with the situation often consider issues at a lower, concrete level (Trope & Liberman, 2010; Weisner, 2015). Higher level representations present issues abstractly and consider *why* actions are performed, providing insight into the advisor's thought process and addressing broad, generalizable expectations. Conversely, lower-level representations present more concretely, consider specifically *how* actions are performed, and convey a solution to a specific context (Trope & Liberman, 2010).[7]

Advisors that provide information at a higher, abstract level are often considered to possess more expertise (Reyt et al., 2016). However, this finding applies only to information seekers who possess greater domain knowledge or who are active participants in an online community. Infrequent users, on the other hand, are less able to interpret and process abstract information and could reject advice provided in this manner unless the advisor is perceived as possessing some form of power over the participant (e.g., a potential employer) (Palmeira, 2015; Reyt et al., 2016; Wakslak, Smith, & Han, 2014). Ex ante it is unclear whether language concreteness and construal findings generalize to online tax community advice. As online tax communities retain a perception of legitimacy given their success and widespread use in the market, individual taxpayers seeking advice on these platforms expect guidance in a form that is easily understood and implemented. Otherwise, the advice could be considered unhelpful.

EVT provides guidance on user reactions when the form of communication received is unanticipated or unexpected (Burgoon, 2015; Clor-Proell, 2009). This interpersonal communications theory finds that individuals' expectancies guide behavior and have persistent effects on their reaction to communication outcomes. Negative violations of an expected action will draw attention to the action and cause individuals to respond more strongly than if the expectation was not present or if the expectation is met (Burgoon & Burgoon, 2001; Burgoon & Hale, 1988). For example, if investors expect firms to exercise conservative accounting choices but the actual choices are aggressive, an expectancy violation will occur, resulting in a stronger negative view of management credibility. However, if investor expectations and firms' actual choices match, firms' aggressive accounting choices would not elicit a strong negative response of management credibility (Clor-Proell, 2009). It is important to note that we are not postulating about whether a

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[4] A variety of reasons could promote expert sharing in virtual professional communities. In an economic transaction, experts have the self-interest to share. In a non-economic transaction, the presence of a community interest or a moral obligation increases the motivation to share (Lin et al., 2009).

[5] Since joining the updated Intuit Turbo Real Money Talk on March 27, 2019, VolvoGirl has posted an additional 54,695 messages and has received 8015 cheers.

[6] Advice, defined by Sniezek and Buckley (1995, 159) as when advisors "formulate judgments or recommend alternatives and communicate these to the person in the role of the judge," can take many different forms.

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[7] We recognize the similarities in describing abstractness (why actions are performed) and concreteness (how actions are performed) between construal level theory and EVT. Although construal level theory enables us to describe abstract versus concrete language within our tax setting, we rely on EVT to inform our predictions. Construal level theory literature may not apply in the individual taxpayer setting where there is an overall lack of domain knowledge and where an abstract response could be viewed as unhelpful given the nature of online tax communities. As such, EVT provides a means of accounting for this potential expectancy violation.

choice is correct, rather we focus on the degree of conservativeness or aggressiveness, reflecting advice utilization, distinct from the ultimate evaluation of such choice.

While active members of an online community have various motivations for engagement, infrequent users are more pragmatic (for a review, see Malinen, 2015). These users are searching for answers on *how* to solve an issue and may be unwilling or unable to seek assistance from a professional who could explain *why* there is an issue. For infrequent users, using the community provides a means to an end, that is, an expedient and hopefully precise answer to an existing issue (Ridings, Gefen, & Arinze, 2006). While users could be inclined to follow advice from a trustworthy platform, the advice itself must be provided by a reliable source and conform to user expectations. Advice recipients expect the communication to be clear and concise, particularly in the case of an infrequent user who lacks domain knowledge. If this expectation is not met, the user will be less likely to incorporate the given advice and may reject the advisor.

In the context of online tax communities, the proclivity for experts to represent issues more abstractly and idealistically (e.g., Danziger et al., 2012) may be inconsistent with the desires of the average taxpayer who is searching for advice to address a specific question. That is, taxpayers prefer information provided in a concrete manner describing how to resolve a tax concern. If that expectation is violated (i.e., a negative violation), users would be less likely to utilize the advice. The designation of tax expertise, through designations provided on the tax community platform, can provide the initial formation of an expectation about what type of advice would be beneficial if provided. Moving beyond who provides responses in a community, the actual content of a response could also shape expectations when there is a tax expert. Specifically, how advice is communicated, either using high-level abstract language or low-level concrete, specific language, could impact expectations and whether the advice would be used by a taxpayer.

We expect that specific language explaining how to resolve a tax question can confirm expectations surrounding a response from a deemed tax expert in comparison to a high-level, abstract response. As such, expectations are met when an expert communicates in a manner conductive to the purpose of a taxpayer's search on an online community and there is a greater likelihood of impounding the advice in the tax decision-making process. If, however, an expert provides a high-level response, then there is an expectancy violation and a lower likelihood that a taxpayer presented with such response would use such advice in their tax decisions. Thus, we present our first hypothesis:

H1. The effect of increasing language concreteness on advice utility in taxpayers' decisions is stronger when an online tax community response comes from a deemed expert versus a non-expert.

2.3. Heuristic and systematic processing

Advice provided on online tax communities is not officially endorsed and solely reflects the views of individuals. These platforms provide readily available information, possibly reducing cognitive load and information search costs. In online tax communities, it is uncertain how users prioritize information gathering. That is, whether users are relying on indicators of response usefulness or evaluating the response itself. Prioritization will depend on the implementation of systematic or heuristic thinking implemented by individuals when utilizing these platforms.

Systematic processing involves an attempt to thoroughly understand information while heuristic processing relies on easily understood signals (Kahneman, 2011). Systematic processing requires more time and effort by the individual to complete, but results in greater confidence and understanding. Conversely, heuristic processing is more efficient and completed quickly (Chaiken & Ledgerwood, 2012). In our setting, response provider expertise, through mental shortcuts such as the recognition of the "TaxPro" label, can boost heuristic processing through

the authority cue heuristic (Lin et al., 2016). Based on the authority cue heuristic, response providers with an expertise recognition should be perceived both as a reliable information source as well as more popular in the online tax community. Distinctly, information that requires effortful processing such as the usefulness of the response can trigger systematic processing. As a result, taxpayers focus on the response content itself, including language concreteness, rather than on the characteristics of the response provider.

As many tax community users have limited domain knowledge, tax community information could induce heuristic reliance where individuals implement advice based on platform popularity indicators, such as promoting recommended answers based on the number of "likes" or "cheers" labeling respondents as tax experts. Moreover, perceived prescribed response usefulness could also impact utilization of the provided advice. As such, we predict that perceived response provider popularity and response usefulness mediate the relationship between expertise, language concreteness, and advice utility.

H2a. Perceived response provider popularity mediates the relationship between expertise, language concreteness, and advice utility in taxpayers' decisions.

H2b. Perceived response usefulness mediates the relationship between expertise, language concreteness, and advice utility in taxpayers' decisions.

3. Research design

3.1. Participants

We recruit 185 individual taxpayers via Prolific.[8] Prolific is an online labor market offering access to diverse pools of participants including U. S. taxpayers, potential jurors, and nonprofessional investors. Prior research indicate that Prolific is a high-quality online labor market for academic research because of the high transparency in recruitment and workers' adequate knowledge in conducting scientific research studies (Palan & Schitter, 2018). Online labor market workers exhibit similar levels of honesty and equivalent if not greater levels of effort and motivation than traditional research participants (Farrell, Grenier, & Leiby, 2017). To qualify for the task, potential participants must be over the age of 18, currently reside in the U.S., and have at least five years of tax filing experience (Brink & Lee, 2015). Following Bentley (2021) we require Prolific workers to maintain a minimum approval rate of 95% and use Prolific as the only online labor market platform.

In Table 1, we find that on average participants are 42.99 years old, have 22.56 years of individual tax filing experience, come from 39 different states, and are not familiar with educational tax credits.[9] On average participants believe their tax returns have a 6 % chance of audit, higher than actual audit rates for all but the wealthiest of Americans (Internal Revenue Service (IRS), 2022), and report negative affective response toward taxpaying activities. Approximately 80% of participants file their taxes using tax preparation software. Further, participants report familiarity with several online tax communities, suggesting

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[8] We obtained Institutional Review Board approval prior to recruiting participants or collecting data. To incentivize effort and attention, participants were compensated $1.50. On average, participants completed the experiment in 12.61 min resulting in an effective hourly wage of $7.14. Further, we included a bonus compensation structure to mimic the tax filing process with the chance of audit. Participants were eligible for a bonus of up to $2.00, receiving higher compensation for claiming a larger tax credit amount. If audited, participants lost all bonus compensation and received only the base pay. We removed six participants that indicated zero tax credit amounts for the initial and final decisions. We further removed two participants that indicated credit amounts under $20.

[9] Results are not driven by individual traits or tax return filing behavior (*p*-values>0.1).

Table 1

Descriptive statistics.

Panel A. Participant Demographics (*n* = 185).

	Mean	25th Pctl	Median	Std. Dev.	75th Pctl	Min	Max
Years of tax filing experience	22.56	11.00	20.00	13.62	32.00	5.00	55.00
Educational tax credit familiarity	3.08	1.00	3.00	1.78	5.00	1.00	7.00
Audit rate perception	7.75	4.00	7.00	4.89	10.00	0.00	20.00
Seek out or use information from online communities	5.66	5.00	6.00	1.41	7.00	1.00	7.00
Only use information from users who have answered many questions	4.55	4.00	5.00	1.50	6.00	1.00	7.00
Only use information from tax experts	4.21	3.00	4.00	1.42	5.00	1.00	7.00
Only use information because of cheers	4.86	4.00	5.00	1.42	6.00	1.00	7.00

	Number	Percent
What method do you use to prepare federal return?		
Paper and pencil	3	1.62
Paid tax preparer	34	18.38
Tax preparation software (software or online access)	148	80.00
TurboTax	83	56.08
H&R Block	24	16.22
TaxAct	15	10.14
Free Tax USA	13	8.78
Tax Slayer	4	2.70
CashApp Tax	3	2.03
Other	6	4.05
Have you used an online tax community?		
AnswerXchange (TurboTax)	34	18.38
The H&R Block Community	40	21.62
Ask Tax Guru	6	3.24
Reddit.com/r/tax	52	28.11
FreeTaxUSA	25	13.51
How have you interacted with an online tax community?		
I have asked a question	28	15.14
I have answered a question	4	2.16
I have found an answer for a question I had (did not post)	100	54.05
Other	54	29.19
In the last year you filed taxes, what was the outcome?		
Received a refund	116	62.70
Owed additional taxes	41	22.16
Neutral (neither refund nor owe)	28	15.14
Gender		
Male	73	39.46
Female	110	59.46
Nonbinary	2	1.08
Education		
Some high school	5	2.70
High school	18	9.73
Some college	49	26.49
Bachelor's degree	79	42.70
Graduate school or higher	34	18.38
Age		
18–25	10	5.40
26–30	28	15.12
31–35	29	15.66
36–40	24	12.96
41–45	21	11.34
46–50	19	10.26
51–55	16	8.64
56–60	10	5.40
Above 60	28	15.12
Income		
< $20,000	12	6.49
$20,000 - $49,999	59	31.89
$50,000 - $74,999	33	17.84
$75,000 - $99,999	33	17.84
$100,000 - $150,000	27	14.59
> $150,000	21	11.35

Panel B. Affect Measures Regarding Paying Taxes[a] (n = 185)

	Mean	25th Pctl	Median	75th Pctl	Std. Dev.	Min	Max
Frustrated	4.97	4.00	5.00	6.00	1.70	1.00	7.00
Angry	3.89	2.00	4.00	5.00	1.87	1.00	7.00
Fearful	3.51	2.00	3.00	5.00	1.89	1.00	7.00

Table 1 (*continued*)

Panel B. Affect Measures Regarding Paying Taxes[a] (n = 185)

	Mean	25th Pctl	Median	75th Pctl	Std. Dev.	Min	Max
Like	2.05	1.00	2.00	2.00	1.40	1.00	7.00
Happy	1.76	1.00	1.00	2.00	1.18	1.00	6.00
Elated	1.53	1.00	1.00	2.00	1.06	1.00	6.00

Panel C. Filing Complexity in the Last Year[b] (n = 185)

	Number	Percent
Tax situations		
Itemized deductions	62	33.51
Self-employment income	66	35.68
Capital gains or losses	58	31.38
Rental income	8	4.32
Taxable scholarships	1	0.01
Educational tax credits	8	4.32
Childcare tax credits	28	15.14
Earned income tax credit (EITC)	46	24.86
Did not file return	5	2.70
Have claimed educational tax credit		
HOPE Credit/American Opportunity Credit	35	18.92
Lifetime Learning Credit	25	13.51
I have not attended a qualifying educational institution	61	32.97
I do not know	71	38.38

[a] Affect judgments are solicited using 7-point Likert scales anchored on 1 (Strongly Disagree) and 7 (Strongly Agree).
[b] Participants have the option of selecting some, all, or none of the tax filing options presented below. Therefore, the percentages do not sum to 100%.

that online tax communities can reach a broad swatch of individual taxpayers.[10]

3.2. Experimental task and design

We conduct a 2 × 2 between participants experimental design manipulating response provider deemed expertise and response language concreteness. We manipulate deemed expertise at two levels: non-expert and tax expert. In the non-expert response condition, the response appears to have been sent by another TaxBam user with the user id 7,416,621. In the expert response condition, the response appears to have been sent by another TaxBam user with the user id 7,416,621 who is also labelled as a "TaxPro." We manipulate response language concreteness at two levels: abstract and concrete. The Linguistic Category Model (LCM) is used as a framework to generate TaxBam responses (Semin & Fiedler, 1991). Using this model, the abstract condition describes a more interpretive situation that lacks context and could be applied to many individuals, while the concrete condition employs verbs that reference specific objects related to the tax issue with context that promotes incorporation by the requesting user.[11] More specifically, in the abstract response, participants receive a high-level response that describes the purpose and limitations of the credit, emphasizing *why* the participant can utilize the tax credit. The participants are given information on who would be eligible to receive the credit and why the listed expenses are (not) eligible. In the concrete condition, participants receive a low-level, specific response that describes *how* to take the

credit and notes which expenses are eligible. These participants are provided with information on which expenses are eligible and how to file for the credit.

Participants are asked to assume the role of an individual taxpayer completing their federal income taxes for the current year using Tax-Bam, a well-known tax preparation software. Participants are not completing a tax return and are rather presented with summary information about their tax reporting situation. Participants are notified that even when using tax filing software, they are responsible for the information on their tax return. They are also notified that as a result of possible incorrect tax credit calculations provided by tax software, other taxpayers have been subject to IRS audit where there could be underpayment fines, penalties, and interest for improperly claiming tax credits on their return. Participants are told that they are an independent, single filer with $50,000 taxable income that currently owes $4300 in taxes which have already been withheld from wages. In the current year, the taxpayer is enrolled full time as a graduate student at a local university and has various educational expenses including tuition and fees, required books and supplies, off-campus room and board in university owned housing, and student health insurance. Participants are then provided with information about the American Opportunity Credit and the Lifetime Learning Credit (LLC) describing the eligibility requirements, amounts, and modified adjusted gross income phaseouts for each credit. We utilize the LLC as our ambiguous tax situation. Use of the LLC is subject to a per-return ceiling, qualifying expense limitations, and income phaseouts.[12] Participants are then instructed to make an initial estimate of how much tax credit they can claim on their tax return.

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[10] Participants were randomly assigned into the four experimental conditions. To investigate the effectiveness of the randomization, we conduct a series of ANOVA analyses by regressing our experimental factors on each demographic variable. Results indicate effective randomization (*p*-values>0.1).

[11] The language in the abstract condition utilizes more State (SV) and State Action Verbs (SAV) compared to the concrete condition's use of Descriptive Action Verbs (DAV). We believe use of excessive abstraction in a tax setting would present the information as unhelpful and antithetical to the intent of the online community providing useful advice. We do not find a difference in time spent on our Qualtrics manipulation screen between our conditions, reflecting similar processing time and suggesting that participants were able to understand our manipulations without any change in effort.

[12] We use the LLC as our ambiguous tax situation because while the educational tax credit can have a wide reach and help lower taxes owed as a nonrefundable credit, there are inherent complexities in applying the provision (IRC §25A). Up to $10,000 in direct educational expenses including tuition and related expenses for any course that improves job skills are allowed at 20% for a maximum of a $2000 nonrefundable tax credit. The $2000 per tax return maximum credit is not dependent on filing status or dependents with qualifying expenses. There is also a credit phaseout based on modified adjusted gross income between $58,000 and $68,000 ($116,000 and $136,000 for a joint return).

Due to uncertainty in how to handle the educational expenses, participants are told that they have turned to the TaxBam online tax community to search for a similar situation before proceeding. All conditions then receive identical information about the TaxBam online community and the website's credibility (Rains & Karmikel, 2009). The TaxBam online tax community is introduced as an opportunity for individual Tax-Bam software users, power users, and Tax Pros to ask and answer questions encountered while completing tax returns using TaxBam software. However, TaxBam does not verify or endorse responses. Participants are told that they have found two responses about the LLC on the TaxBam community: one automated response and one response from a TaxBam community member. The automated response is the same in all conditions and provides general information about educational tax credits, similar to the information provided prior to the initial tax credit estimate. Participants then view the manipulated response from a Tax-Bam community member. Participants subsequently make their final tax credit decision. Following their decision, participants are asked to determine the perceived usefulness of the automated response and the community member response. Participants then determine which response to give a cheer to, mimicking the real-world interactions in online tax communities. Before exiting the experiment, participants answer a series of questions including a question that measures the perceived popularity of the TaxBam responder to other online community members.

3.2.1. Dependent variable

We capture individual taxpayer decision making through the amount of tax credit claimed. We use the final amount of educational tax credit that will be taken on the hypothetical tax return as the main dependent variable (hereafter: *Tax Credit*). Participants can select a credit amount ranging from $0 to $2300, reflecting qualifying educational expenses for the LLC ranging from $0 to $11,500. While the LLC is capped at $2000, we enable taxpayers to exhibit a greater amount of risk seeking behavior. Participants are told when making their final tax credit decision that claiming a larger amount of credit than entitled could result in an audit. Given the facts of the situation, the correct amount of LLC would be $1000. However, we are focused on the extent of advice utilization rather than correctness. As such, in our setting greater (less) advice utilization would result in a more conservative (aggressive) tax reporting.

3.2.2. Mediators

We capture two mediators to understand the underlying mechanisms of the effects of the independent variables on our main dependent variable of interest. Drawing from the literature of heuristic versus systematic processing (Chaiken & Ledgerwood, 2012; Kahneman, 2011), we use perceived popularity of the response provider (hereafter: *Popularity*) and perceived response usefulness (*Usefulness*). *Popularity* is measured by a 7-point Likert scale question asking participants to indicate the popularity of the responder ranging from 1 (not at all popular) to 7 (very popular). *Usefulness* is measured by a question that required participants to indicate the relative decision usefulness between the automated response from the online community and the response from another community user. Participants allocated percentage values between the two responses to get a total of 100%, and the percentage value assigned to the response from a participant determines the value of *Usefulness*.

4. Results

4.1. Manipulation checks

Manipulation checks are conducted to ensure that participants understood the deemed expertise and concreteness manipulations as intended. To assess our deemed expertise manipulation, we ask participants on a 7-point Likert scale anchored on 1 (inexperienced taxpayer) and 7 (highly experienced tax professional) to indicate the extent to which they

believe the response was provided by a tax expert (Petty, Cacioppo, & Goldman, 1981). We find that after controlling for concreteness, participants in the deemed tax expert condition report higher expertise perceptions than participants in the non-expert condition ($F = 3.22$, $p = 0.07$). To investigate concreteness, we ask participants on 7-point Likert scales anchored on 1 (strongly disagree) and 7 (strongly agree) to indicate the extent to which they agreed that the TaxBam user response explained how to file for the tax credit and why they were eligible for the tax credit.[13] These measures capture quality perceptions of the manipulated response. We find that participants in the concrete condition report higher agreement on how to file for the tax credit than participants in the abstract condition ($F = 6.52$, $p = 0.01$). However, we do not note any difference between concreteness conditions on why participants were eligible for the tax credit. One possible explanation is that how to file focuses on the conditional use of the LLC while inquiring about why participants qualify assesses the overall purpose of the credit.

4.2. Hypotheses testing

4.2.1. Testing H1

First, we use analysis of covariance (ANCOVA) to test the significance of the differences between experimental conditions. We expect that individual taxpayers will report more conservative tax credit amounts, reflecting greater advice use, if provided advice from a deemed tax expert that is communicated in a concrete manner compared to in an abstract manner. We also expect that this difference will be smaller if the advice was from a non-expert. Table 2, Panel A presents the sample size, means, and standard deviations for individual taxpayers' initial tax credit decision (*Initial Credit*) provided by participants prior to viewing tax advice from the TaxBam online community in each experimental condition. There are no significant differences across conditions. Table 2, Panel B presents the sample size, means, and standard deviations for individual taxpayers' final tax credit decision (*Tax Credit*) in each experimental condition. We provide the plot of means in Fig. 1. We present the ANCOVA in Panel C, controlling for the initial tax credit estimate (*Initial Credit*).[14]

We find that the interaction term between deemed expertise and concreteness is positively associated with the final tax credit decision, consistent with EVT and providing support for H1 ($F = 6.19$, $p = 0.014$). Our result indicates that the final decision of a taxpayer in an online tax

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[13] Inclusion of our manipulation check questions as control variables does not impact our main results. Alternatively, we also inquire about whether the response provided the exact tax form necessary to file for the tax credit. We do not find an explainable relationship across our conditions, which could be attributable to a preference for e-filing where tax form numbers are less important compared to completing paper tax returns.

[14] We follow prior literature and treat the change in tax credit as a supplementary dependent variable due to its inherent issues in measurement reliability and statistical power (Edwards, 2001). To resolve the issues, Edwards (2001) suggests researchers use the ANCOVA method that tests the post-score as the dependent variable by controlling for the pre-score as a covariate (hereafter: *Initial Credit*). The initial tax credit estimate also ranges from $0 to $2300. To provide additional support of the results in testing H1, we investigate the change in tax credit reporting (*Credit Change*) given TaxBam response provider expertise and language concreteness. The change in LLC claimed enables us to examine the revision in decisions made due to viewing online tax community advice. *Credit Change* is the change between the final tax credit decision amount and the initial tax credit estimate, made before viewing any response from the online tax community. Untabulated ANOVA results show a positive and significant interaction between expertise and concreteness ($F = 2.96$, $p = 0.087$), confirming our predictions using EVT. Follow-up simple effect analyses show that the effect of language concreteness is present when the message is from a deemed tax expert ($p = 0.098$, one-tailed) but absent and pointing to the opposite direction when the message is from a non-expert ($p = 0.128$, one-tailed). Fig. 1, Panel B provides a graphical presentation of the interaction effect.

Table 2
Tax credit.

Panel A. Sample statistics for experimental conditions – *Initial Credit*			
Mean (standard deviation)		Concreteness[b]	
		Abstract	Concrete
	Non-Expert	1336.72 (697.33) $n = 43$	1230.00 (760.77) $n = 48$
Tax Expertise[a]	Expert	1461.74 (656.90) $n = 46$	1261.67 (735.93) $n = 48$

Panel B. Sample Statistics for Experimental Conditions – *Tax Credit*			
Mean (standard deviation)		Concreteness[b]	
		Abstract	Concrete
	Non-Expert	1092.09 (552.42) $n = 43$	1122.08 (633.20) $n = 48$
Tax Expertise[a]	Expert	1285.65 (626.14) $n = 46$	933.33 (521.59) $n = 48$

Panel C. Results of ANCOVA for Tax Credit[c]					
Source	Type III Sum of Square	df	Mean Square	F	p-value
Corrected Model	27,614,833.2	4	6,903,708.31	33.216	<0.001
Tax Expertise	66,639.93	1	66,639.93	0.321	0.572
Concreteness	306,193.64	1	306,193.64	1.473	0.226
Tax Expertise × Concreteness	1,286,653.92	1	1,286,653.92	6.191	0.014
Initial Credit	24,678,515.26	1	24,678,515.26	118.737	<0.001
Error	37,411,385.14	180	207,841.03		

Panel D. Follow-Up Simple Effects Tests		
Source of variation	df	p-value
Effect of concreteness given non-expert response	1	0.188[d]
Effect of concreteness given expert response	1	0.005[d]

[a] Tax expertise is manipulated at two levels: non-expert or expert. In the non-expert response condition, the response appears to have been sent by another TaxBam user with the user id 7,416,621. In the expert response condition, the response appears to have been sent by another TaxBam user with the user id 7,416,621 who is also labelled a TaxPro.

[b] Concreteness is manipulated at two levels: abstract or concrete. In the abstract condition, participants receive a high-level response that describes the purpose and limitations of the credit, emphasizing *why* the participant can utilize the tax credit. In the concrete position, participants receive a low-level response that describes *how* to take the credit and notes which expenses are eligible.

[c] The dependent variable is tax credit reported. Participants indicated the amount of educational tax credit they would report on their tax return. We include the initial tax credit estimate as a covariate.

[d] Denotes one-tailed *p*-values.

community is contingent on both expertise and concrete language. We further note that initial tax credit decisions are positively associated with participants' final decisions (F = 118.74, $p < 0.01$).

We conduct follow-up simple effects tests to obtain a detailed understanding of the interaction term in the ANCOVA model (see Table 2, Panel D). Consistent with the predictions of EVT, we find a significant difference between abstract and concrete language when there is a deemed tax expert providing the online community response ($p = 0.005$, one-tailed). In contrast, this difference is not significant when a non-expert provides the response ($p = 0.188$, one-tailed). Untabulated post-hoc mean comparisons indicate that taxpayers' *Tax Credit* are the lowest when an expert uses concrete language, higher when a non-expert uses either abstract or concrete language, and highest when an expert uses abstract language.[15] In summary, our results support H1 and the predictions in EVT that taxpayers form expectations when receiving responses from an expert and discount the decision usefulness of the response when such expectations are violated when receiving responses using abstract language.

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[15] We conduct a series of post-hoc comparisons and confirm that the reported tax credit is the lowest when an expert uses concrete language (one tailed *p*-values<0.1). Interestingly, we find unexpected results that the highest reported tax credit comes from the situation when an expert uses abstract language (one tailed *p*-values<0.1). The unexpected results demonstrate the strength of negative violations in our setting, and taxpayers substantially discount the usefulness of an expert's abstract information to an extent that its usefulness is even lower than that of information coming from non-experts.

A. Tax Credit Taken
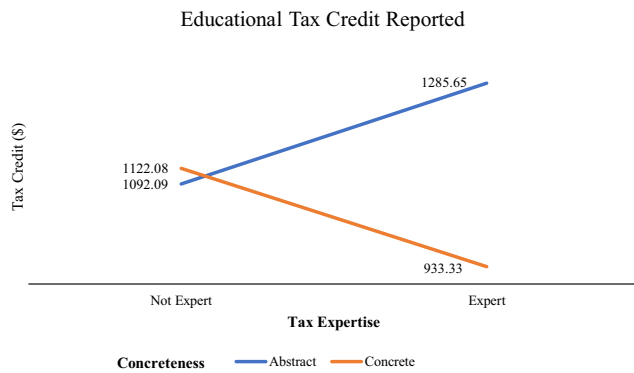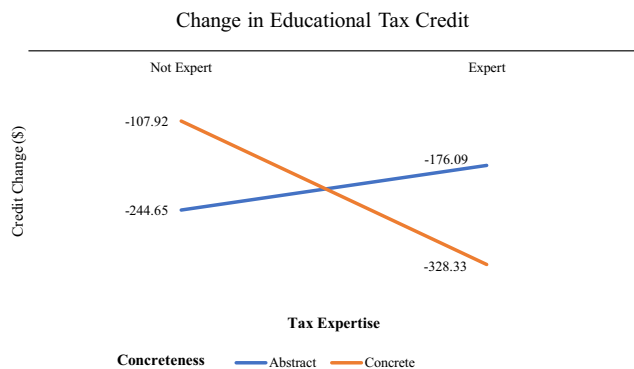

B. Change in Tax Credit Estimate

Fig. 1. Plot of means by condition.
Panel A. Tax Credit Taken.
Panel B. Change in Tax Credit Estimate.

4.2.2. Testing H2a and H2b

To better understand the mechanisms by which deemed tax expertise (hereafter: *Expertise*) and language concreteness (*Concreteness*) affect taxpayer decision making, we conduct mediation analyses using the conceptual model presented in Fig. 2. We test the conceptual model using SPSS PROCESS v4.1 by Hayes (2022) with a 10,000-bootstrapping sample, and the testing model is model 8. Fig. 3 illustrates the paths for the proposed mediation model, including path coefficients and indicators of significance. In Table 3, Panels A and B, we provide descriptive statistics for the two mediators. Panels C and D present path coefficients and indirect effect results, respectively.

In H2a and H2b, we predict that the effects of *Expertise* and *Concreteness* on *Tax Credit* is mediated through *Popularity* and *Usefulness*, respectively. We first examine the mediation effects through *Popularity*. Direct effect tests fail to find significant effects from the experimental factors to *Popularity* (p-values>0.1, one-tailed) or the effect from *Popularity* to *Tax Credit* ($\beta = 16.75$, $p = 0.291$, one-tailed). Indirect effect tests also fail to establish a significant mediation effect for *Popularity* (confidence intervals include zero). Therefore, H2a is not supported.

Second, we examine the mediation effects through *Usefulness*. Direct effect results show that *Expertise* has a significant negative impact on *Usefulness* ($\beta = -10.12$, $p = 0.047$, one-tailed). The *Expertise*Concreteness* interaction term is positive and significant for *Usefulness* ($\beta = 17.48$, $p = 0.018$, one-tailed). The opposite directions of the results indicate that taxpayers' perceived usefulness of the response is lower when an expert uses abstract language but higher when the same expert uses concrete language. This finding is consistent with the predictions of EVT and our findings in H1. Next, the direct effect from *Usefulness* to *Tax Credit* is also significant ($\beta = -2.64$, $p = 0.018$, one-tailed). More importantly, the moderated mediation index is significant (95% CI = LL:

-107.41; UL: -1.62). An examination of the conditional indirect effects indicates that the effect from *Concreteness* to *Tax Credit* through *Usefulness* is significant when the response provider is an expert (95% CI = LL: -81.63; UL: -2.74) but insignificant when the response provider is a non-expert (95% CI = LL: -16.51; UL: 42.63). Therefore, our significant moderated mediation results support H2b.

In summary, our mediation analyses demonstrate the uniqueness of online tax communities from social media platforms (e.g., Twitter). Although online tax communities share similar features with social media platforms (e.g., messaging and replying), participants in online tax communities are purposefully searching for useful answers for specific tax decisions rather than browsing updates from popular users. Therefore, they form tax-related decisions based more on systematic processing about the decision usefulness of the underlying response than on heuristic processing about the popularity of the response provider.

### 4.3. Additional analyses

4.3.1. Cheers

We capture user interactions in the online tax community through the designation of a cheer feature. We construct a cheer to be equivalent to the assignment of a like to an online tax community response (e.g., Kipp et al., 2019). Participants can only assign a cheer to either the automatically generated community response or to the manipulated advisor provided response. Untabulated results show a positive and significant interaction term between advisor deemed expertise and language concreteness (F = 5.07, $p = 0.03$), where there is a higher cheer likelihood for a tax expert provided response using concrete language. Through simple effects tests we find consistent results with our findings in hypotheses testing. Particularly, we find an increase in cheer likelihood when a tax expert uses concrete language compared to abstract language ($p = 0.009$, one-tailed). In contrast, this difference is not significant when the response provider is a non-expert ($p = 0.211$, one-tailed). Collectively, our results suggest that the source and development of online community advice can affect users' interactions in the platform (e.g., giving cheers), impacting taxpayer decisions and possibly making such responses more prominent to future community members.

4.3.2. Alternative explanations

Other than our experimental manipulations, there are two major factors in online tax communities that could provide alternative explanations for our findings. First, given that there is an audit feature in the experiment, participants' risk preferences (e.g., risk seeking or risk avoidance) could influence the tax credit amounts. Second, participants' preferences regarding tax compliance could impact our experimental results. In our post-experiment questionnaire, we measure participants' risk preferences (hereafter: *Risk Preference*) and perceptions regarding tax compliance (hereafter: *Tax Perception*) as two variables to rule out such alternative explanations.[16]

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[16] To measure risk preferences, we adopt a nine-question dichotomous survey measure from Holt and Laury (2002) that captures individuals' strength in seeking risks. *Risk Preference* is calculated as the average score of risk-seeking answers in the nine questions (Cronbach's Alpha = 0.724; Nunnally, 1978, 245). To measure perceptions regarding tax compliance, we adopt a six-question seven-point scale measure from Moreno et al. (2002) that reflects individuals' affective reactions regarding paying taxes (e.g., fear or happiness about paying taxes). *Tax Perception* is calculated as the average score of the six questions after a reverse coding of three out of six questions (Cronbach's Alpha = 0.808; Nunnally, 1978, 245). Alternatively, we use perceived audit probability as an additional control variable, which does not impact the results ($p = 0.700$). We continue to note a positive and significant interaction term between expertise and concreteness ($p = 0.015$, two-tailed). Upon further examination, our aggregate risk measure is also not correlated with perceived audit probability (Pearson correlation = -0.018, $p = 0.808$) providing additional confidence in our analyses.

Conceptual Diagram of the Mediation Model
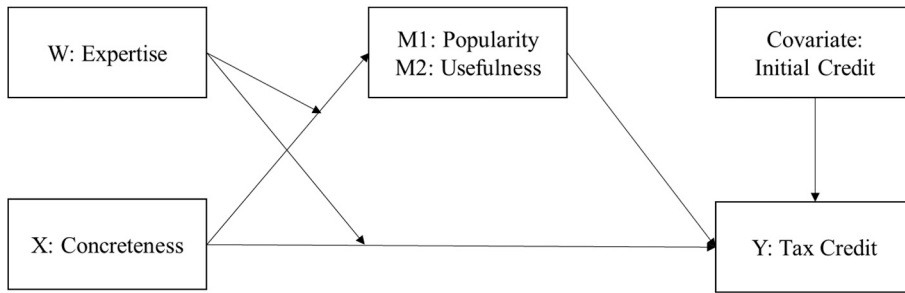
Fig. 2. Conceptual diagram of the mediation model. Fig. 2 is an illustration of the conceptual diagram of the mediation model with perceived popularity of the response provider (M1) and perceived response usefulness (M2) as the two mediators for the effects of language concreteness (X) and expertise (W) on taxpayers' final tax credit decision (Y). The mediation model also includes taxpayers' initial tax credit estimate as a covariate.

Panel A. *Popularity* **as the Mediator**
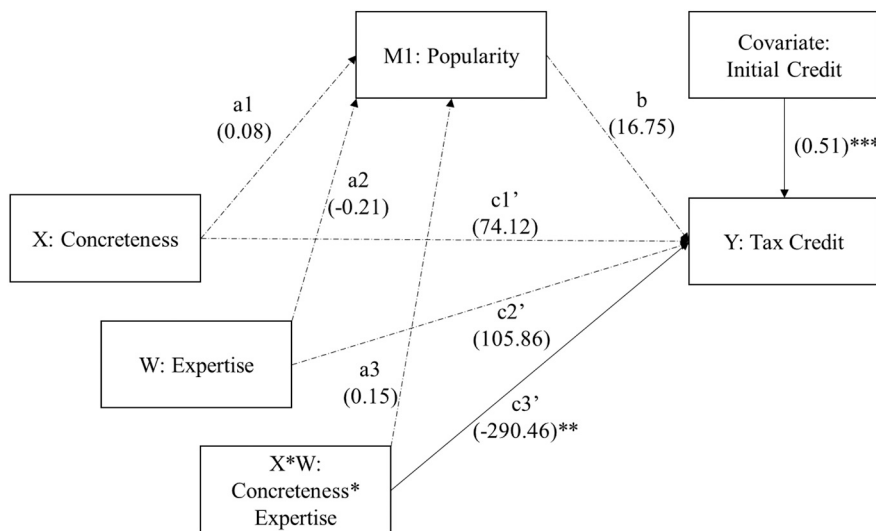
Fig. 3. Statistical diagram of the mediation model.
Panel A. *Popularity* as the Mediator.
Panel B. *Usefulness* as the Mediator.
***: p-value<0.01, **: p-value<0.05, *: p-value<0.1 (one-tailed).

Panel B. *Usefulness* **as the Mediator**
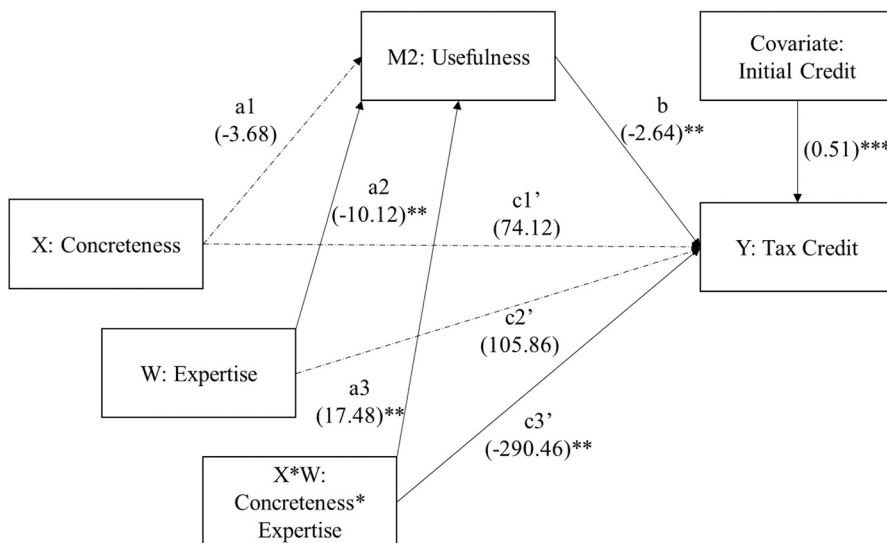
We examine the influence of these two variables to our results by adding them as covariates to the ANCOVA model that tests H1. Untabulated ANCOVA results show that *Risk Preference* is not a significant covariate (F = 2.41, p = 0.122). Although *Tax Perception* is a significant covariate in the model (F = 5.18, p = 0.024), the *Expertise*Concreteness* interaction effect is still significant (F = 6.92, p = 0.009). Follow-up simple effects tests indicate that results are qualitatively similar to the tabulated model testing H1, and the effect of language concreteness is

Table 3

Mediation analyses.

Panel A. Sample Size, Means, and Standard Deviations for *Popularity*			
Mean (standard deviation)		Concreteness	
		Abstract	Concrete
Tax Expertise	Non-Expert	8.14 (1.15) $n = 43$	8.21 (1.11) $n = 48$
	Expert	7.93 (1.14) $n = 46$	8.15 (1.24) $n = 48$

Panel B. Sample Size, Means, and Standard Deviations for *Usefulness*			
Mean (Standard Deviation)		Concreteness	
		Abstract	Concrete
Tax Expertise	Non-Expert	60.12 (25.27) $n = 43$	56.52 (30.71) $n = 48$
	Expert	49.89 (29.13) $n = 46$	63.85 (26.92) $n = 48$

Panel C. Path Coefficients			
Variable	β (M1: Popularity)	β (M2: Usefulness)	β (DV: Tax Credit)
X: Concreteness	0.08	−3.68	74.12
W: Expertise	−0.21	−10.12**	105.86
X*W: Concreteness*Expertise	0.15	17.48**	−290.46**
M1: Popularity			16.75
M2: Usefulness			−2.64**
Covariate: Initial Credit			0.51***

Panel D. Conditional Indirect Effects and Index of Moderated Mediation				
Indirect effect	Condition or index	Effect	LLCI	ULCI
Concreteness ➔ Popularity ➔ Tax Credit	Non-expert	1.28	−11.33	19.83
	Expert	3.77	−10.75	30.07
	Moderated Mediation Index	2.49	−16.34	29.23
Concreteness ➔ Usefulness ➔ Tax Credit	Non-expert	9.72	−16.51	42.63
	Expert	−36.42[a]	−81.63	−2.74
	Moderated Mediation Index	−46.14[a]	−107.41	−1.62

Table 3 presents the statistical results of the mediation model with perceived popularity of the response provider (M1) and perceived response usefulness (M2) as the two mediators for the effects of language concreteness (X) and expertise (W) on taxpayers' final tax credit decision (Y). The mediation model also includes taxpayers' initial tax credit estimate as a covariate. Path coefficients and one-tailed p-values are obtained using PROCESS (Hayes, 2022) with 10,000 bootstrap samples and 95% level of confidence.

[a] Denotes significant effect at 95% level of confidence.

significant for tax expert ($F = 6.99$, $p = 0.005$, one-tailed) but insignificant for non-expert ($F = 1.19$, $p = 0.139$, one-tailed). Therefore, we rule out participants' risk preferences and tax compliance perceptions as alternative explanations.

5. Conclusion

Online tax communities have the capability to reach millions of individual taxpayers using tax preparation software to file their federal income tax returns. There is growing regulatory concern about protecting taxpayers from external advice (U.S. Congress, Committee on Finance, 2014, 2015; Convert, 2016). Nonetheless, concern has not yet shifted to include online platforms such as online tax communities. In this study, we experimentally examine the extent to which individual taxpayers utilize advice from an online tax community. Specifically, we examine two facets of online advice: whether a response comes from a purported expert and how abstractly or concretely the language of a given response is communicated. Based on EVT, we expect and find that

advice originating from a deemed tax expert whose response uses concrete rather than abstract language results in greater taxpayer use, increasing reporting conservatism in our tax credit scenario.

Our study contributes to the broader understanding of the distinction between heuristic and systematic reactions to online advice. Particularly, we contribute to the burgeoning EVT literature by distinguishing the role of expertise from the linguistic framing of a response. Moreover, we build on the existing advisor literature by examining a context where advisees may reject advice communicated in a broad, generalizable manner. Contrary to a stream of literature on advice taking that finds greater advice utilization when received from experts communicating abstractly (e.g., Reyt et al., 2016), we find taxpayer expectations are met when an expert provides a response using concrete language, resulting in greater advice use and more conservative tax reporting. However, expectancy violations occur when taxpayers are provided with a response from a purported tax expert worded in an abstract manner, yielding stronger negative reactions, and less use of the advice, than if the response was provided by a non-expert. Practically, we contribute to

the understanding of how taxpayer interactions with online tax communities shape subsequent tax decisions. Concerns could arise that tax expertise is misidentified or if harmful advice is provided, leading taxpayers to unduly rely on the advice (U.S. Congress, Committee on Finance, 2016; Shah & Kitzie, 2012). Our study provides empirical evidence on how taxpayers' use of online tax community advice can affect the extent to which valuable education tax credits are claimed. We find that how responses are communicated can affect reliance on free advice, prompting renewed consideration for regulations encompassing online tax community advice (Lewis, 2017).

As in all studies, limitations exist, which can provide opportunities for future research. First, we utilize individual taxpayers as participants in this study. Recruited from Prolific, participants did not complete the study in a controlled laboratory environment. However, prior literature has shown that such participants recruited from online platforms are adequately motivated (Farrell et al., 2017). Second, we utilize a specific tax setting, the LLC. We focus on an educational tax credit as our setting since the LLC can reach a broad portion of the population and has very specific requirements for qualifying expenses and allowable credit amounts. Future research can examine whether taxpayers who have different prior knowledge about the setting engage in greater expectation violations when exposed to online tax community advice. Alternatively, examining a more homogenous group of taxpayers, such as self-employed individuals, may yield further explanation. Third, our setting utilizes only one manipulated response. Future research can vary response quantity and advice provided. Additionally, future research can investigate how taxpayers rely on online advice after several years of making their decisions using such advice. Over a longer timeframe, taxpayers might develop heuristics to sort through advice from multiple advisors. Taxpayer norms, personal traits, tax evasion perceptions, and use of non-expert dominated social media platforms could further impact advice reliance. Finally, future research could examine specific factors the impact reliance.

Fig. 3 is an illustration of the mediation model with perceived popularity of the response provider (M1) and perceived response usefulness (M2) as the two mediators for the effects of language concreteness (X) and expertise (W) on taxpayers' finalized tax credits (Y). The mediation model also includes taxpayers' initial tax credit estimate as a covariate. Path coefficients and one-tailed *p*-values are obtained using PROCESS (Hayes, 2022) with 10,000 bootstrap samples and 95% level of confidence. Path coefficients, indirect effects, and confidence intervals are also reported in Table 3. Solid arrows represent significant path coefficients and dashed arrows represent insignificant path coefficients.

Declaration of Competing Interest

None.

Data availability

The data that has been used is confidential.

Acknowledgements

References

Bentley, J. W. (2021). Improving the statistical power and reliability of research using Amazon mechanical turk. *Accounting Horizons, 35*(4), 45–62.

Bonaccio, S., & Dalal, R. S. (2006). Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences. *Organizational Behavior and Human Decision Processes, 101*(2006), 127–151.

Brink, W. D., & Lee, L. S. (2015). The effect of tax preparation software on tax compliance: A research note. *Behavioral Research in Accounting, 27*(1), 121–135.

Burgoon, J. K. (2015). Expectancy violations theory. In C. R. Berger, & M. E. Roloff (Eds.), *The international encyclopedia of interpersonal communication* (1st ed., pp. 1–9). John Wiley & Sons, Inc.

Burgoon, J. K., & Burgoon, M. (2001). Expectancy theories. In W. P. Robinson, & H. Giles (Eds.), *The new handbook of language and social psychology* (pp. 79–99). West Sussex, U.K.: Wiley.

Burgoon, J. K., & Hale, J. L. (1988). Nonverbal expectancy violations: Model elaboration and application to immediacy behaviors. *Communication Monographs, 55*(1), 58–79.

Business Wire. (2013). Intuit TurboTax first to deliver personalized answers to Affordable Care Act questions [Press release]. Available at: https://www.aol.com/article/finance/2013/09/30/intuit-turbotax-first-to-deliver-personalized-answ/20733257/.

Casaló, L. V., Flavián, C., & Guinalíu, M. (2011). Understanding the intention to follow the advice obtained in an online travel community. *Computers in Human Behavior, 27*(2), 622–633.

Chai, S., & Kim, M. (2010). What makes bloggers share knowledge? An investigation on the role of trust. *International Journal of Information Management, 30*(5), 408–415.

Chaiken, S., & Ledgerwood, A. (2012). A theory of heuristic and systematic information processing. In P. A. M. van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 246–266). Thousand Oaks, CA: Sage.

Chiu, C. M., Hsu, M. H., & Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support Systems, 42*(3), 1872–1888.

Chiu, C. M., Wang, E. T., Shih, F. J., & Fan, Y. W. (2011). Understanding knowledge sharing in virtual communities: An integration of expectancy disconfirmation and justice theories. *Online Information Review, 35*(1), 134–153.

Clor-Proell, S. M. (2009). The effects of expected and actual accounting choices on judgments and decisions. *The Accounting Review, 84*(5), 1465–1493.

Convert, B. (2016). *Elizabeth Warren wants to take down TurboTax*. ThinkProgress. Available at https://thinkprogress.org/elizabeth-warren-wants-to-take-down-turbotax-f2df913fb4f9/.

Culver, J. D., Gerr, F., & Frumkin, H. (1997). Medical information on the internet. *Journal of General Internal Medicine, 12*(8), 466–470.

Dalal, R. S., & Bonaccio, S. (2010). What types of advice do decision-makers prefer? *Organizational Behavior and Human Decision Processes, 112*(1), 11–23.

Danziger, S., Montal, R., & Barkan, R. (2012). Idealistic advice and pragmatic choice: A psychological distance accounting. *Journal of Personality and Social Psychology, 102*(6), 1105–1117.

Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods, 4*(3), 265–287.

Farrell, A. M., Grenier, J. H., & Leiby, J. (2017). Scoundrels or stars? Theory and evidence on the quality of workers in online labor markets. *The Accounting Review, 92*(1), 93–114.

Friedberg, C. (2018). *Taxpayer anxiety disorder*. Thrive Global. Available at https://medium.com/thrive-global/taxpayer-anxiety-disorder-7818d4113f3a.

Gray, T. (2015). Better software lets you kick back and do your taxes. The New York Times (February 15). Available at: https://www.nytimes.com/2015/02/15/business/yourtaxes/reviewing-tax-preparation-software-that-maneuvers-from-mobile-to-desktop.html.

Hammer, D. (2016). *5 online/social communities for tax professionals*. Intuit ProConnect. Available at https://taxprocenter.proconnect.intuit.com/practice-management/5-online-communities-for-tax-professionals/.

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis, second edition: A regression-based approach*. New York, NY: Guilford Publications.

Holt, C. A., & Laury, S. K. (2002). Risk aversion and incentive effects. *The American Economic Review, 92*(5), 1644–1655.

Internal Revenue Service (IRS). (2022). IRS Data Book. Available at: https://www.irs.gov/statistics/soi-tax-stats-irs-data-book.

Kahneman, D. (2011). *Thinking fast and slow*. New York, NY: Farrar, Straus, and Giroux.

Kim, S., & Oh, S. (2009). Users' relevance criteria for evaluating answers in a social Q&A site. *Journal of the Association for Information Science and Technology, 60*(4), 716–727.

Kipp, P., Zhang, Y., & Tadesse, A. (2019). Can social media interaction and message features influence nonprofessional investors' perceptions of firms? *Journal of Information Systems, 33*(2), 77–98.

Lewis, D. (2017). *Ambivalent but not indifferent: Consumer motivations to seek versus avoid professional advice (Doctoral dissertation)*. Retrieved from ProQuest Database.

Lin, M. J., Hung, S. W., & Chen, C. J. (2009). Fostering the determinants of knowledge sharing in professional virtual communities. *Computers in Human Behavior, 25*(4), 929–939.

Lin, X., Spence, P. R., P, R, & Lachlan, K. A. (2016). Social media and credibility indicators: The effect of influence cues. *Computers in Human Behavior, 63*, 264–271.

Loving, V. (2014). *Internal Revenue Service. 13-5061. United States Court of Appeals, District of Columbia Circuit*.

Malinen, S. (2015). Understanding user participation in online communities: A systematic literature review of empirical studies. *Computers in Human Behavior, 46*, 228–238.

Moreno, K., Kida, T., & Smith, J. F. (2002). The impact of affective reactions on risky decision making in accounting contexts. *Journal of Accounting Research, 40*(5), 1331–1349.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review, 23*(2), 242–266.

Nam, K. K., Ackerman, M. S., & Adamic, L. A. (2009). Questions in, knowledge in? A study of Naver's question answering community. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 779–788).

Nunnally, J. (1978). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.

O'Donnell, E., Koch, B., & Boone, J. (2005). The influence of domain knowledge and task complexity on tax professionals' compliance recommendations. *Accounting, Organizations and Society, 30*(2), 145–165.

Palan, S., & Schitter, C. (2018). Prolific.ac—A subject pool for online experiments. *Journal of Behavioral and Experimental Finance, 17*, 22–27.

Palmeira, M. (2015). Abstract language signals power, but also lack of action orientation. *Journal of Experimental Social Psychology, 61*, 59–63.

Parra-López, E., Bulchand-Gidumal, J., Gutiérrez-Taño, D., & Díaz-Armas, R. (2011). Intentions to use social media in organizing and taking vacation trips. *Computers in Human Behavior, 27*(2), 640–654.

Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of Personality and Social Psychology, 41*(5), 847–855.

Podgorny, I. A. (2016). Modification of question writing style influences content popularity in a social Q&A system. *arXiv*. preprint arXiv:1601.04075.

Rains, S. A., & Karmikel, C. D. (2009). Health information-seeking and perceptions of website credibility: Examining web-use orientation, message characteristics, and structural features of websites. *Computers in Human Behavior, 25*(2), 544–553.

Reyt, J.-N., Wiesenfeld, B. M., & Trope, Y. (2016). Big picture is better: The social implications of construal level for advice taking. *Organizational Behavior and Human Decision Processes, 185*, 22–31.

Ridings, C., Gefen, D., & Arinze, B. (2006). Psychological barriers: Lurker and poster motivation and behavior in online communities. *Communications of the Association for Information Systems, 18*(16), 329–354.

Semin, G. R., & Fiedler, K. (1991). The linguistic category model, its bases, applications and range. *European Review of Social Psychology, 2*(1), 1–30.

Shah, C., & Kitzie, V. (2012). Social Q&A and virtual reference—Comparing apples and oranges with the help of experts and users. *Journal of the Association for Information Science and Technology, 63*(10), 2020–2036.

Sniezek, J. A., Buckley, T., & T.. (1995). Cueing and cognitive conflict in judge-advisor decision making. *Organizational Behavior and Human Decision Processes, 62*(2), 159–174.

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review, 117*(2), 440–463.

TurboTax. (2017). TurboTax live community – live help when you need it. Available at: https://turbotax.intuit.com/best-tax-software/why-choose-turbotax/help-live-community.jsp.

U.S. Congress, Committee on Finance. (2014). *Protecting taxpayers from incompetent and unethical return preparers: Hearing before the committee on finance, United States senate, one hundred thirteenth Congress, second session (April 8)* (Cong).

U.S. Congress, Committee on Finance. (2015). Wyden, Cardin introduce legislation to help protect consumers from fraudulent tax preparers [Press release] (January 8). Available at: https://www.finance.senate.gov/ranking-members-news/wyden-cardin-introduce-legislation-to-help-protect-consumers-from-fraudulent-tax-preparers.

U.S. Congress, Committee on Finance. (2016). Wyden calls for robust taxpayer protections from identity theft and tax refund fraud. Available at: https://www.finance.senate.gov/ranking-members-news/wyden-calls-for-robust-taxpayer-protections-from-identity-theft-and-tax-refund-fraud.

Wakslak, C. J., Smith, P. K., & Han, A. (2014). Using abstract language signals power. *Journal of Personality and Social Psychology, 107*, 41–55.

Wasko, M. M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS Quarterly*, 35–57.

Weisner, M. (2015). Using construal level theory to motivate accounting research: A literature review. *Behavioral Research in Accounting, 27*(1), 137–180.