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The impact of task interruption on tax accountants' professional judgment

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ABSTRACT

Accounting professionals are frequently interrupted, and prior research suggests that task interruption could compromise the quality of their professional judgments. This paper adopts the Goal-Based Choice Model to predict conditions under which task interruption will: (1) exacerbate accountants' motivated reasoning, introducing bias into their professional judgments, and (2) reduce performance on the *interrupting* task. We validate the model by conducting an experiment using experienced tax professionals as participants. Consistent with the expanded model's predictions, we find that when tax professionals are highly committed to a directional goal (minimize the client's tax liability), task interruption exacerbates their motivated reasoning, increases their perceptions of the level of support for an aggressive tax compliance position, bolsters their confidence in its defensibility, and compromises their ability to objectively evaluate the risks associated with the position. These factors cascade to increase the likelihood that they will recommend an aggressive tax compliance position. Furthermore, we find that the impact of task interruption cascades to inhibit *interrupting* task performance. Our results suggest that task interruption can create costly inefficiencies when these issues must be addressed during the review process, and that severe consequences for firms and their clients can arise when the review process fails to identify these deficiencies. In addition, our results suggest that task interruption's costs may outweigh its benefits in the context of professional judgment.

1. Introduction

Accounting professionals are frequently interrupted while they perform work-related tasks because they must be responsive to clients and coworkers, and adapt to constantly shifting priorities (Long & Stanley, 2012). Emerging research in consumer psychology suggests that task interruption can systematically shift consumers' judgments in a direction consistent with their primary goal(s). Tax professionals are motivated to minimize the client's tax liability in order to maximize after-tax income. We integrate the Goal-Based Choice (GBC) Model (van Osselaer & Janiszewski, 2012) from the consumer psychology literature with motivated reasoning theory (Kunda, 1990) to predict that when tax professionals are highly committed to this goal, task interruption will systematically shift their judgments towards goal-congruent directional extremes, and induce confidence bolstering. This is problematic because task interruption does not provide decision-relevant information; therefore, a systematic directional effect of task interruption on professional judgment is non-normative, and the resulting judgments are biased.

Tax accountants' professional judgments are also subject to external scrutiny (e.g., administrative or regulatory review). When the directional shift induced by task interruption results in overly-aggressive tax compliance recommendations, a number of consequences can occur. When inappropriate judgments are discovered during the review process, undesirable inefficiencies associated with correcting these issues arise, resulting in additional costs for the firm and/or client. If inappropriate judgments survive the review process, and are subsequently judged to be overly-aggressive, accounting professionals, firms, and their clients can be exposed to significant consequences (e.g., Cloyd and Spilker [1999] note that in the context of a tax compliance recommendation, the disallowance of a tax position can lead to sanctions and reputational damage for the firm, and penalties and interest for the taxpayer). Furthermore, increased confidence in the justifiability of relatively aggressive compliance recommendations implies that task interruption

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compromises tax professionals' ability to objectively evaluate the strength of alternative compliance positions, and the relative risks associated with them. This may cause taxpayers to unknowingly adopt compliance positions that are misaligned with their risk preferences.

We also expand the GBC Model to incorporate the concept of "attention residue" (Leroy, 2009) and extend the model to account for the impact of task interruption on *interrupting* task performance. We predict that when individuals are highly committed to a primary goal on an interrupted task, cognitions related to the interrupted task's primary goal will interfere with cognitions related to the interrupting task, increasing cognitive load and inhibiting *interrupting* task performance. This suggests that interruption can reduce performance on both the *interrupted* and *interrupting* tasks. It is important to account for these costs so that individuals can make fully-informed cost/benefit decisions about their exposure and responsiveness to task interruptions.

To validate the application of the expanded GBC Model to professional judgment in the accounting domain, we conducted a web-based experiment employing tax professionals as participants. Consistent with the model's predictions, we found that task interruption magnified the impact of motivated reasoning on tax professionals' judgments when they were highly committed to minimizing the client's tax liability. This was manifested in higher perceptions of the level of support for an aggressive tax position. We also found that the increased motivated reasoning induced by task interruption results in confidence bolstering: interrupted tax professionals who were highly committed to minimizing the client's tax liability perceived the chances of successfully defending an aggressive tax compliance position against a regulatory challenge to be greater. These factors cascaded to increase the likelihood that tax professionals would recommend an aggressive tax compliance position. Lastly, we found that interruption inhibits performance on the *interrupting* task.

This study makes three important theoretical contributions. First, it extends the task interruptions and accounting literatures by integrating a model of consumer choice with motivated reasoning theory to predict the impact of task interruption on professional judgment in the accounting context. Secondly, it expands the model to include attention residue and extends it to describe the impact of task interruption on the *interrupting* task. Lastly, it provides initial evidence in support of a boundary condition suggested by the model that governs the impact of task interruption on judgment and interrupting task performance: sufficiently high levels of goal commitment. Collectively, the results provide initial evidence in support of several propositions of the expanded GBC Model, and validate that the model provides a firm theoretical foundation for future research on this topic.

From a practical perspective, this study provides initial evidence that task interruption can systematically bias professional judgments under conditions commonly encountered in practice. In the context of a tax compliance recommendation, when biased judgments are discovered during the review process, undesirable inefficiencies associated with correcting these issues arise, resulting in additional costs for the firm and/or the client. If inappropriate recommendations survive the review process, clients may adopt compliance positions that are misaligned with their risk preferences. To the extent that these positions are overly-aggressive, consequences for both the tax professional and the taxpayer can occur. In addition, evidence that task interruption can reduce performance on the interrupting task provides a more complete accounting of the costs of task interruption, and implies that the cost of task interruption may outweigh its benefits in the context of professional judgment. However, these findings were conditional on high levels of goal commitment, suggesting that the negative consequences associated with task interruption are limited to settings in which accounting professionals are highly committed to directional goals.

The remainder of this paper is organized as follows: First, we review the relevant literature and develop our hypotheses. Next, we describe our research methodology and present our results. We close with a discussion of our findings, our conclusions, the study's limitations, and opportunities for future research.

2. Literature review and hypothesis development

2.1. Task interruption

Task interruptions are "incidents or occurrences that impede or delay organizational members as they attempt to make progress on work tasks" (Jett & George, 2003; p. 504). Prior research in the information systems, human factors, and psychology domains has found that interruptions adversely affect performance on all but the simplest of tasks (see Spiekermann & Romanow, 2008 for a review). Accounting professionals are frequently interrupted while they complete work tasks (Long & Stanley, 2012), and serious consequences can arise when they fail to complete these tasks effectively. Yet, the accounting domain differs from contexts considered by prior research along several important dimensions, including individuals' domain expertise and their incentives to complete tasks efficiently and effectively. Therefore, emerging research in accounting has begun to explore whether the findings from the extant interruptions literature can be generalized to the accounting domain (e.g., Harding, Kim, & Mayorga, 2013; Long, McClain, & Searcy, 2014; Mullis & Hatfield, 2015). These studies provide evidence that task interruption inhibits accounting professionals' performance, consistent with the broad findings of the extant task interruption literature in other disciplines.

However, this literature has primarily examined the impact of interruption on tasks for which performance can be objectively evaluated in terms of accuracy (e.g., Basoglu, Fuller, & Sweeney, 2009; Speier, Valacich, & Vessey, 1999; Speier, Vessey, & Valacich, 2003), and largely ignored the impact of interruption on judgment and decision-making.[1] The exception is emerging research in consumer psychology, which has begun to explore the impact of task interruption on consumers' preferences (judgments). These studies document that task interruption can systematically affect judgment, shifting preferences towards desirability at the expense of feasibility (Liu, 2008) and causing goal reversion when consumers experience goal conflict and temporarily set aside one of the conflicting goals (Carlson, Meloy, & Miller, 2013).

Within the accounting domain, a number of tasks require individuals to exercise professional judgment. Accountants' professional judgments differ from consumer judgments because they are constrained by justifiability requirements and subject to external scrutiny, and inappropriate judgments can carry serious consequences. These circumstances incentivize accounting professionals to provide defensible judgments, isolated from the effects of factors

[1] Although Harding et al. (2013) and Mullis and Hatfield (2015) discuss the impact of task interruption (multitasking) on accountants' professional judgment, their measures of performance were associated with participants' ability to identify seeded errors. Therefore, these tasks were effectively evaluated in terms of accuracy. Furthermore, Mullis and Hatfield (2015) consider the impact of task interruption on a subsequent task, not the interrupted or interrupting task.

that do not provide judgment-relevant information, such as task interruption. Furthermore, prior research provides evidence that experts, working on tasks within their domain, may be less susceptible to judgmental biases relative to non-expert decision-makers; therefore "conclusions drawn regarding specific professional judgments should also be based on investigations using tasks and subjects representative of those contexts" (Smith & Kida, 1991; p. 487).

The portion of the Goal-Based Choice model that predicts an impact of task interruption on judgment has yet to be validated by research specifically directed to that end. Furthermore, the studies from which these model propositions were drawn employed student participants whose judgments were unconstrained by justifiability requirements, were not subject to external review, and were not likely to carry serious consequences (e.g., Bargh, Lee-Chai, Barndollar, Gollwitzer, & Trötschel, 2001; Fitzsimons, Chartrand, & Fitzsimons, 2008; Laran & Janiszewski, 2009). Therefore, it is unclear whether the model's predictions will be applicable to accountants' professional judgment. We also expand the model to include the concept of attention residue (Leroy, 2009) and extend it to account for the impact of task interruption on *interrupting* task performance. Leroy (2009) found that time pressure, a feature commonly encountered in the accounting environment, reduced the impact of attention residue on interrupting task performance; therefore, it is unclear whether attention residue will inhibit interrupting task performance in the accounting domain. Lastly, we employ the expanded model to predict a boundary condition that limits the impact of interruption on professional judgment and interrupting task performance to settings in which individuals are highly committed to the interrupted task's primary goals. This boundary condition has not been tested empirically. Given the differences between consumer and professional judgments with respect to consequences, incentives, and decision-maker expertise and task familiarity, it is important to consider whether the impact of task interruption on judgment observed in the consumer choice context extends to professional judgment in the accounting domain. Furthermore, it is important to verify several of the expanded model's propositions empirically.

2.2. Professional judgment in the tax domain

Tax professionals are frequently called upon to provide clients with recommendations (professional judgments) about various tax positions for planning and compliance purposes. For instance, they may be asked to evaluate the tax consequences of various transaction structures, or recommend a tax position. As described by O'Donnell, Koch, and Boone (2005), in the context of a tax compliance recommendation, tax professionals acquire an understanding of the client's facts and circumstances, locate relevant authoritative guidance,[2] evaluate the clients' facts and circumstances against the criteria specified in the authoritative guidance, and determine whether a receipt (expenditure) should be included as part of taxable income (claimed as a tax deduction) (p. 146). The tax professional then recommends a reporting position to the client. Unlike consumer judgments, accountants' professional judgments are evaluated against external decision criteria arising from regulatory requirements, professional standards, and/or firm-specific guidance. Therefore, accounting professionals must defend their judgments with respect to these criteria (Davis & Solomon, 1989). They do so by justifying the factors they incorporated into their judgment, and the relative weight accorded to each factor. Magro and Nutter (2012) argue that factors which do not provide judgment-relevant information (such as task interruption) should not be reflected in accountants' professional judgments (p. 294). To the extent that task interruption affects professional judgment, it represents undesirable bias.

2.3. The Goal-Based Choice Model

We adopt, expand and extend the Goal-Based Choice (GBC) Model (van Osselaer & Janiszewski, 2012) to inform our theoretical expectations about the impact of task interruption on tax professionals' judgment and on interrupting task performance. This model accounts for individual choice in the context of a consumer product evaluation. However, we contend that its theoretical mechanisms should be broadly applicable to a number of judgment settings.[3]

The GBC Model posits that individuals make choices that allow them to pursue goals. A goal represents a desirable outcome. To obtain this outcome, individuals evaluate alternative means (behaviors, products, or services) that they believe can influence the achievement of the desired outcome (help or hinder goal attainment). They then choose the means that they believe will maximize the likelihood of achieving the desired outcome (attaining the goal).

Individuals pursue multiple goals that frequently conflict, and the implementation of one means may increase the likelihood of attaining one goal, but reduce the likelihood of attaining another. Therefore, when individuals evaluate means, they implicitly assign a weight to each goal reflecting its relative importance, and select the means that maximizes weighted overall goal attainment. Important goals carry more weight relative to less important goals, and thus exert a stronger influence on the ultimate choice of means. Cognitively, goal importance is manifested as goal activation in memory (van Osselaer & Janiszewski, 2012; p. 263). Thus, relative goal activation determines how much influence each goal exerts on the choice of means (Bargh et al., 2001; Laran & Wilcox, 2011; Laran, Janiszewski, & Cunha, 2008).

2.4. The impact of task interruption on judgment

Goal activation is not static, and varies in response to a number of factors. Variations in goal activation affect the relative weights assigned to goals during the evaluation of means, and thus affect choice. One critical factor that affects goal activation is the individual's level of goal commitment. Goal commitment is positively related to goal focus (Fishbach & Dhar, 2005; van Osselaer & Janiszewski, 2012), which in turn is positively related to goal activation (van Osselaer & Janiszewski, 2012; p. 266 and H2.9, p. 268). The GBC model predicts that as goal commitment increases, goal activation increases, and the goal exerts more influence on the individual's ultimate choice of means. Therefore, when an individual is highly committed to a goal, this "primary" goal will exert significant influence on the individual's choice of means.

Task interruption also affects goal activation by triggering *goal*

[2] Authoritative guidance related to tax reporting can be found in tax legislation, regulations, bulletins and case law. The specific authoritative guidance relevant to the issues confronting participants in our experiment can be found in the Internal Revenue Code, the Treasury (Tax) Regulations, and the Internal Revenue Bulletins. Interpretations of this guidance can be found within the IRS's regulations, as well as in judicial precedent.

[3] Furthermore, we contend that it provides a parsimonious account of the findings of the emerging consumer psychology literature, subsuming other theoretical explanations for the impact of task interruption on judgment that have been proposed to date, including Construal Level Theory (Liu, 2008) and goal escalation (Carlson et al., 2013).

activation escalation. The GBC Model predicts that when goal pursuit is suspended during the "goal deprivation period" (i.e., the interruption interval), goals associated with the interrupted task escalate in activation until an opportunity to pursue them arises (Carlson et al., 2013; Chartrand, Huber, Shiv, & Tanner, 2008).[4] This implies that the increase in goal activation is positively related to the length of the interruption (van Osselaer & Janiszewski, 2012; p. 279).[5] Furthermore, the GBC model predicts that goal activation increases *exponentially* over the interruption interval (van Osselaer & Janiszewski, 2012; p. 279). This means that an individual's primary goal will grow in activation faster than other goals. Upon resumption of the interrupted task, the primary goal will be more highly activated relative to other goals than it was before the interruption; therefore, when the evaluation of means is interrupted before a choice is made, the primary goal will exert more influence on the choice of means (van Osselaer & Janiszewski, 2012).

Fig. 1 illustrates goal activation escalation during a hypothetical three period interruption interval. Goals #1, #2 and #3 begin with 3, 2 and 1 units of activation, respectively. At Time 1, Goal #1 accounts for 50% (3/6) of the total suspended goals' activation. However, given the exponential nature of goal activation escalation, Goal #1 accounts for 75% (27/36) of the total suspended goals' activation as of Time 3. Therefore, the GBC model predicts that Goal #1 will exert a stronger influence on the choice of means subsequent to the interruption.

2.5. Tax professionals' goals in the context of a basic tax compliance recommendation

In the context of a basic two-choice tax compliance recommendation, a tax professional chooses one of two means: (1) recommend that the client exclude a receipt from income/deduct an expenditure as an expense, or (2) recommend that the client include a receipt as income/not deduct an expenditure as an expense. The choice of means is driven by the tax professional's perceptions of how each means satisfies relevant goals. Each goal is weighted by its relative importance, and the tax professional then chooses the means that is perceived to provide the best overall weighted goal satisfaction.

Tax professionals serve as client advocates (Barrick, Cloyd, & Spilker, 2004; Cloyd & Spilker, 1999; Roberts, 1998). This role provides them with a strong directional primary goal: maximize the client's after-tax income by minimizing their tax liability. To achieve this objective in a basic two-choice tax compliance recommendation task, they can recommend tax reporting positions that rely on aggressive interpretations of the client's facts and circumstances and authoritative guidance to exclude certain receipts from income or deduct certain expenditures as expenses. However, regulatory requirements stipulate that the tax professional must identify reasonable support to justify the recommended compliance position, and must manage the risk that regulatory authorities will successfully challenge and disallow it. Specifically, they must in good faith believe that they have adequate support for tax positions they recommend, as noted by Kaplan, Reckers, West, and Boyd (1988) and Spilker, Worsham, and Prawitt (1999).[6]

This justification requirement constrains tax professionals' ability to pursue their primary goal. When a clear match exists between the client's facts and circumstances and the applicable authoritative guidance, the appropriate recommendation becomes evident, there is little room for variation in professional judgment, and it is difficult to justify an aggressive recommendation. However, when there is an imperfect match between decision criteria and relevant facts and circumstances, ambiguity arises, and tax professionals must employ professional judgment to determine the appropriate recommendation. When the mismatch creates sufficient ambiguity, tax professionals may exploit it to justify aggressive tax positions that satisfy their primary goal: minimize the client's tax liability.[7] The ability to reasonably justify an aggressive tax position under conditions of ambiguity is the critical mechanism that allows the tax professional to select a means that satisfies the primary goal, while respecting the constraints induced by the justification requirement.

Ideally, tax professionals objectively evaluate the client's facts/circumstances with respect to the applicable authoritative guidance. This allows them to accurately assess the extent to which an aggressive tax position can be justified, and limits the pursuit of their advocacy goal to circumstances under which it can be reasonably justified. However, prior research suggests that accounting professionals subconsciously employ motivated reasoning to pursue their advocacy goal at the expense of their accuracy goal. That is, their advocacy goal may be more important, and thus more highly activated, than their accuracy goal.

2.6. The impact of motivated reasoning on tax professionals' judgment

Kunda (1990) maintains that accuracy goals and directional goals (such as the tax minimization goal) influence judgment by affecting cognitive processing. Accuracy goals motivate individuals to employ processing strategies that are considered to be most appropriate (e.g., they attend more carefully to relevant information and engage in more effortful and deeper cognitive processing).

[4] Kupor, Reich, and Shiv (2015) identify individuals' need for psychological closure as the mechanism driving goal activation escalation.

[5] Although van Osselaer & Janizewski's GBC Model (2012) specifies a positive relationship between the length of time over which a goal is set-aside and its activation, it is likely that there is an inverted-U relationship between the length of the goal deprivation period and set-aside goal activation. As the length of the goal deprivation period and the number of intervening goals increases, the effort required to maintain an increasingly active but delayed goal should overwhelm the individual's limited cognitive resources, resulting in the eventual deactivation of the goal. The moment at which this tipping point is reached likely depends on a number of individual and task factors. However, prior research provides evidence that goal activation escalation can occur over goal deprivation periods of five (Bargh et al., 2001) and eight minutes (Chartrand et al., 2008), suggesting that task interruption can influence judgment over interruption intervals commonly encountered in practice (e.g., email, phone calls).

[6] The current study was conducted in the United States federal tax context, in which tax professionals are constrained by the requirement to find "substantial authority" supporting an aggressive tax position. Judicial precedent suggests that this corresponds to at least a 35–40% probability that the position is sustained upon audit or litigation (Spilker et al., 2015; pp. 2–24).

[7] Ambiguity is the critical feature of the tax compliance environment that facilitates construction of reasonable justification for an aggressive tax position. In the tax compliance context, ambiguity is negatively related to the extent to which there is a clear match between the client's facts and circumstances (i.e., as the clarity of the match increases, ambiguity decreases). When ambiguity is low, the tax professional should be able to easily identify the appropriate tax position, leaving little room to justify an aggressive tax position (even if the "obvious" compliance recommendation minimizes the client's tax liability, it is not aggressive when it is clearly supported by the match between the client's facts and circumstances and the authoritative guidance). As the level of ambiguity increases, the match between the client's facts and circumstances and the regulatory criteria is reduced, and tax professionals must begin to exercise professional judgment to determine the appropriate recommendation. Under these conditions, the tax professional can more easily exploit ambiguity to construct a reasonable justification to support an aggressive tax position (Ayres, Jackson, & Hite, 1989; Cloyd & Spilker, 2000; Johnson, 1993).

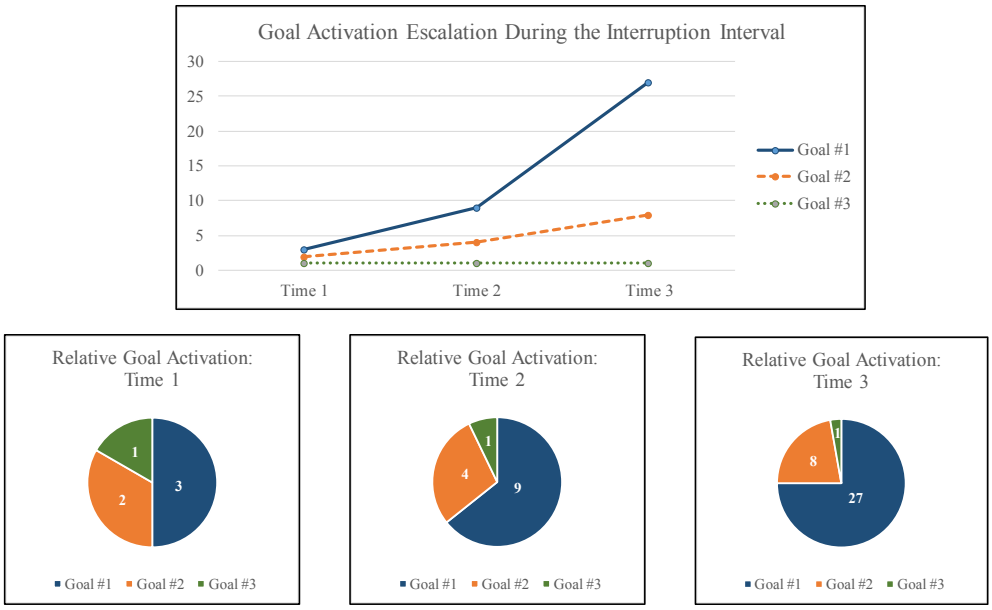


Fig. 1. Goal activation escalation and relative goal activation during the interruption interval.

Conversely, directional goals motivate individuals to employ processing strategies that are likely to result in goal-congruent conclusions. These strategies include directionally-biased: (1) memory search, (2) belief construction, (3) use of inferential rules, and (4) selection of beliefs and rules (Kunda, 1990). Furthermore, individuals exhibit differential levels of skepticism towards preference-consistent and preference-inconsistent information, accepting the validity and accuracy of goal-congruent information relatively easily while evaluating goal-incongruent information critically (Ditto & Lopez, 1992; Ditto, Munro, Apanovitch, Scepansky, & Lockhart, 2003; Ditto, Scepansky, Munro, Apanovitch, & Lockhart, 1998). Through these cognitive mechanisms, directional goals affect: (1) perceptions about the relative strength of the evidence for and against the desired conclusion (perceived to be stronger and weaker, respectively), and (2) the relative weight assigned to goal-congruent and goal-incongruent information (more and less weight, respectively) (Boiney, Kennedy, & Nye, 1997). This yields judgments that are more extreme in the direction of the individual's directional goal(s). As noted by Kahle and White (2004), when differential perceptions of the strength of evidence items and the relative weights assigned to them are driven by the individual's directional goals, rather than an objective evaluation of the information's diagnosticity, the resulting judgment is biased (p. 2).

When individuals must construct reasonable justifications for their preferred conclusion in order to maintain an "illusion of objectivity," the influence of directional goals on judgment is subject to reasonableness constraints (Kunda, 1990). Furthermore, there is a positive relationship between the severity of the consequences arising from an inappropriate judgment and the importance of accuracy goals (Kunda, 1990). Thus, accuracy goals should be relatively more important as the consequences of an inappropriate judgment become more severe, and individuals should engage more appropriate processing strategies under these circumstances. However, the presence of strong accuracy *and* directional goals may exacerbate directional bias when the extensive processing fostered by strong accuracy goals facilitates justification construction (Kunda, 1990; p. 487).

The accounting literature provides evidence that motivated reasoning occurs in multiple accounting contexts, including auditing (e.g., Hackenbrack & Nelson, 1996; Kadous, Kennedy, & Peecher, 2003), investor decision-making (e.g., Hales, 2007), and managerial decision-making (e.g., Boiney et al., 1997). Tax professionals' strong directional advocacy goal, and the relative importance of accuracy induced by justification constraints, make them particularly susceptible to motivated reasoning, and they exhibit a number of behaviors consistent with it, including biased information search (Cloyd & Spilker, 1999, 2000; Cuccia & McGill, 2000; Kadous, Magro, & Spilker, 2008; Kahle & White, 2004; Wheeler & Arunachalam, 2008), biased evidence weighting (Hatfield, 2001; Johnson, 1993), and the application of differential skepticism toward consistent and inconsistent evidence (Barrick et al., 2004; Hatfield, 2001). Furthermore, consistent with the propositions of the expanded GBC Model, Johnson (1993) finds that commitment to an advocacy goal is positively related to tax professionals' use of motivated reasoning (p. 16, H4).

2.7. *The impact of task interruption on tax professionals' judgments*

Recall that in the context of a tax compliance recommendation, tax professionals' roles as client advocates provide them with a strong directional goal, and motivates them to recommend reporting positions that minimize the client's tax liability, subject to justifiability constraints. When tax professionals are highly committed to this goal, it will be more highly activated relative to other goals, and motivated reasoning theory suggests that the tax professional will engage in stronger directional processing during the development of the recommendation. This in turn will cause highly committed tax professionals to perceive information cues that support a position which minimizes the client's tax liability to be stronger, and to give them more weight, relative to less committed tax professionals. This will strengthen their perceptions of the extent to which the facts and circumstances provide support for the aggressive tax position. Conversely, when tax professionals are less committed to minimizing the client's tax liability, this goal should be activated at lower levels, and the influence of directional processing on individuals' assessments of the strength of the support for the aggressive tax position will be muted.

The GBC Model suggests that when highly committed tax professionals are interrupted, their goals associated with the tax compliance recommendation task (including their primary, highly activated directional tax minimization goal) should escalate in activation exponentially during the interruption interval. Upon resumption of the tax compliance recommendation task, the tax minimization goal will be even more highly activated relative to other goals than it was before the interruption occurred. This will exacerbate highly committed tax professionals' directional processing, further strengthening their perceptions of the level of support for an aggressive tax compliance recommendation.[8]

H1. Tax professionals' evaluations of the level of support for an aggressive tax compliance recommendation will be highest when they are interrupted and highly committed to minimizing the client's tax liability, lower when they are uninterrupted and highly committed to minimizing the client's tax liability, and lowest when they are less committed to minimizing the client's tax liability.

Individuals who perceive that the facts and circumstances provide a higher level of support for a deduction are likely to be more confident that the aggressive tax compliance recommendation is justifiable, and therefore that the taxpayer would prevail if the deduction is challenged by the regulatory authority (i.e., they will experience confidence bolstering, defined as "enhancing confidence beyond what is reasonable" [Boiney et al., 1997, p. 6]).

H2. Tax professionals' estimation of the likelihood of successfully defending the aggressive tax recommendation against a regulatory challenge will be highest when they are interrupted and highly committed to minimizing the client's tax liability, lower when they are uninterrupted and highly committed to minimizing the client's tax liability, and lowest when they are less committed to minimizing the client's tax liability.

Tax professionals who believe that: (1) there is a higher level of support for an aggressive recommendation, (2) the recommendation can be justified, and (3) the recommendation is likely to survive a regulatory challenge, should be free to pursue their directional goal: minimizing the client's tax liability. Therefore, highly committed, interrupted tax professionals should also be most likely to recommend an aggressive tax compliance position.

H3. Tax professionals' preference for an aggressive tax recommendation will be highest when they are interrupted while highly committed to minimizing the client's tax liability, lower when they are uninterrupted but highly committed to minimizing the client's tax liability, and lowest when they are less committed to minimizing the client's tax liability.

2.8. The impact of goal activation escalation on interrupting/subsequent task performance

Leroy (2009) suggests that task interruption could also hinder performance on the interrupting task. She attributes these effects to attention residue, which "refers to cognitions about Task A that persist even though one has stopped working on Task A, transitioned to Task B, and is now working on Task B" (p. 168). Attention residue divides attention between two tasks. This reduces the cognitive resources available to work on the interrupting task and increases cognitive load, inhibiting interrupting task performance (Leroy, 2009).

Integrating attention residue theory with the GBC Model, we propose that task interruption will generate substantial attention residue when individuals are highly committed to a primary goal by exponentially escalating the activation of Task A's primary goal over the goal deprivation period. As individuals divide their attention between goals associated with Task A and Task B, their cognitive capacity will be reduced and their cognitive load increased, decreasing performance on Task B. However, when individuals are not highly committed to Task A's primary goal, we expect that goal activation escalation will not be as significant, and these individuals should not experience a decrease in performance on the interrupting task.[9]

H4. Tax professionals who are highly committed to minimizing the client's tax liability will perform worse on an *interrupting* task than individuals who are less committed to the primary goal or individuals who perform the tasks sequentially.

3. Research method

3.1. The participants

Ninety-four tax professionals completed the experiment. Participants were recruited using a Qualtrics Panel[10,11] and averaged 13.66 years of professional tax experience, 13.29 years of tax return preparation experience, and 11.26 years of tax compliance recommendation experience (Table 1, Panel A). These individuals reported that they were frequently exposed to task interruptions at work (Table 1, Panel A).[12] Demographic information, various measures of experience, interruption frequency, and Basoglu et al.'s (2009) measure of interruption-management ability are reported in Table 1, both overall and by group.

3.2. The experiment

The experimental materials were delivered to participants

[8] Motivated reasoning is the critical mechanism that explains how task interruption affects professional judgment, despite the fact that this type of judgment is constrained by a justification requirement that should foster accurate, rather than directionally-biased, judgments.

[9] When two tasks are performed sequentially (i.e., uninterrupted), Leroy (2009) provides evidence that attention residue may affect performance on the second task, despite completion of the first task and satisfaction of its primary goal. In our context, this suggests that individuals who are highly committed to a primary goal might also exhibit some negative effects of attention residue on performance for the second task, even when they complete the tasks sequentially. However, Leroy finds that time pressure (commonly encountered in the tax professional's environment and in our experimental setting) helps mitigate these effects by narrowing attention and fostering closure with respect to completed tasks. Furthermore, other studies have demonstrated that task completion reduces activation for goals related to the completed task, and frees cognitive resources (e.g., Förster, Liberman, & Friedman, 2007; Förster, Liberman, & Higgins, 2005). Therefore, we do not expect uninterrupted individuals to experience significant performance declines on the second task.

[10] See Brandon, Long, Loraas, Mueller-Phillips, and Vansant (2014) for an in-depth discussion of Qualtrics Panels and Qualtrics's online instrument delivery software.

[11] We contracted with Qualtrics to provide a participant panel consisting of 100 U.S. tax professionals who had experience with tax compliance recommendations at a cost of $30 per participant. Given the specificity of our criteria, and the relative rarity of these individuals within the broader participant population, Qualtrics had difficulty obtaining the 100 responses for which we contracted, and had to solicit participants from panel partners several times. In addition, some of the participants their partners provided did not meet our specified criteria with respect to occupation or professional tax experience, and they had to solicit 40 extra responses to provide us with 100 qualified participants. Of these, six failed our data quality checks, yielding a final sample of 94 participants.

[12] Participants provided an average response of 4.59 to the question "When you are completing tasks at work, how often do you have to interrupt one task with another task (i.e., stop working on the first task before it is finished so that you can start a different task)?" on a 7-point scale anchored on "1 – Never" and "7 – Quite Frequently."

Table 1
Demographic data.

Panel A: Continuous measures

			Group[a]			
		Overall	Int_Higher	UnInt_Higher	Int_Lower	UnInt_Lower
Number of participants		94	17	32	25	20
Attribute	*Scale*	*Mean response*				
Age	Years	43.49	43.71	46.41	43.96	38.05
Tax professional experience	Years	13.66	14.03	15.22	13.92	10.55
Tax return preparation experience	Years	13.29	14.88	14.94	13.16	9.45
Tax compliance recommendation experience	Years	11.26	12.62	12.94	10.52	8.30
Hobby loss experience	Likert (1–7)	5.38	5.65	5.72	5.24	4.80
Task interruption frequency	Likert (1–7)	4.59	4.53	4.53	4.80	4.45
Interruption management ability[b]	Likert (1–7)	5.89	6.50	6.06	5.62	5.45

Panel B: Discrete measures

		Group			
Attribute	Overall	Int_Higher	UnInt_Higher	Int_Lower	UnInt_Lower
Gender					
Female	42	10	10	9	13
Male	52	7	22	16	7
Education					
Highschool	3	1	2	0	0
Undergraduate	42	4	16	13	9
Graduate	46	11	14	11	10
Other	3	1	0	1	1

[a] The group names indicate experimental treatments as follows: *Int_Higher* = Interrupted, High Goal Commit; *UnInt_Higher* = Uninterrupted, High Goal Commit; *Int_Lower* = Interrupted, Low Goal Commit; *UnInt_Lower* = Uninterrupted, Low Goal Commit.
[b] Interruption management ability is a summary measure of interruption management self-efficacy from Basoglu et al. (2009).

online via Qualtrics' instrument delivery software. These materials consisted of an introduction, an ambiguous tax compliance recommendation task adapted from O'Donnell et al. (2005), a scheduling task designed to serve as the interrupting task, and a post-experimental survey. We pilot-tested the experimental materials with graduate and undergraduate accounting students.

The tax compliance recommendation task required each tax professional to recommend whether a hypothetical client should consider a loss arising from a part-time business to be an operating loss for Federal income tax purposes (deductible), or a "hobby loss," arising from activities that are not engaged in for profit (not deductible). It can be deducted as an operating loss from taxable income if the taxpayer can demonstrate that the underlying activity is being conducted for profit, and not solely for personal pleasure. The task began with a set of facts and circumstances surrounding the hypothetical client's tax issue. Then, each tax professional received a summary of the applicable authoritative guidance. The task was structured to be relatively ambiguous. Once participants reviewed the facts and circumstances and authoritative guidance, they were asked to indicate how likely they would be to recommend that the client deduct the loss. During this step, participants were allowed (but not required) to review the information about the client's facts and circumstances and the applicable professional guidance. After providing a recommendation, participants provided an assessment of the level of support for the deduction, the extent to which they perceived the loss to be in a gray area, the clarity of the authoritative guidance, and the likelihood that the deduction could be defended if challenged by the regulatory authority.

The scheduling task (see Appendix A) required participants to compare a prospective client's schedule with their own calendar (provided as part of the experimental materials) to identify a mutually acceptable meeting time. Upon identifying an acceptable time, participants were required to write an email to the prospective client to schedule the meeting. Two of the three meeting times proposed by the client were not compatible with the participant's calendar, and seven of the eight windows in the participant's schedule did not work for the client. Therefore, there was only one meeting period that worked for both the client and the participant, yielding a single correct answer to the task.

3.3. Experimental design

To address our hypotheses, we employed a 2 × 2 experimental design. Our first independent variable, *Interruption*, was manipulated at two levels between subjects (interrupted/uninterrupted). Participants in the interrupted conditions reviewed a set of introductory materials, began the hobby loss task, and were interrupted by the scheduling task after they had evaluated the client's facts and circumstances and the authoritative guidance but before they formed their judgment and submitted their recommendation for the hobby loss task. They then completed the scheduling task, and returned to the judgment/recommendation phase of the hobby loss task. Once they finished the hobby loss task, they completed the post-experimental survey. Uninterrupted participants reviewed a set of introductory materials, and then completed the hobby loss task, the scheduling task, and a post-experimental survey sequentially.[13] Fig. 2 depicts the task flow for each experimental condition.

We assessed our second independent variable, *Goal Commitment*, at two levels (higher/lower). To ensure sufficient variation in *Goal*

[13] All participants were able to review both the client's facts and circumstances and the applicable authoritative guidance prior to rendering their professional judgment.

Group [a]	
Interrupted (Int_Higher/Int_Lower)	*Uninterrupted (UnInt_Higher/UnInt_Lower)*
1 Introduction	**1 Introduction**
2 Hobby Loss Task	**2 Hobby Loss Task**
Facts and Circumstances	Facts and Circumstances
Authoritative Guidance	Authoritative Guidance
3 INTERRUPTION	Judgment and Recommendation
4 Scheduling Task	**3 Scheduling Task**
5 Hobby Loss Task (cont)	**4 Post-Experimental Survey**
Judgment and Recommendation	
6 Post-Experimental Survey	

[a] The group names indicate experimental treatments as follows: *Int_Higher* = Interrupted, High Goal Commit; *UnInt_Higher* = Uninterrupted, High Goal Commit; *Int_Lower* = Interrupted, Low Goal Commit; *UnInt_Lower* = Uninterrupted, Low Goal Commit.

Fig. 2. Experimental task flow by group.

Commitment, we manipulated *Client Preference* at two levels between subjects (conservative/aggressive).[14] The conservative (aggressive) client preference was intended to foster lower (higher) levels of commitment to the tax minimization goal.[15] To construct our *Goal Commitment* variable, we measured participants' commitment to the goal of minimizing the client's tax liability using a five-item scale that has been validated by the psychology literature (Klein, Wesson, Hollenbeck, Wright, & DeShon, 2001) and employed in prior accounting research (e.g., Kadous et al., 2003) (see Appendix B for specific items). We conducted a factor analysis on these five items to determine the extent to which they measure a single construct. Four items loaded on a single unitary construct; the first item failed to load at the suggested level of 0.7, hence it was not included in our ultimate measure of goal commitment. The eigenvalue of the first factor was 2.52 and all the other eigenvalues were less than 1. Cronbach's α was 0.79 and the four items explained 63% of the variance. This provides evidence that these items measure a single construct. Therefore, we averaged these four items together to create a composite measure of goal commitment. We then assigned individuals to higher/lower *Goal Commitment* conditions using a median-split on the composite measure.

The experimental software randomly assigned participants to experimental *Interruption*/*Client Preference* conditions. Our manipulation of *Interruption* and split of participants at the median-level of *Goal Commitment* yielded four groups for the purposes of hypothesis testing:

- Interrupted/Higher Goal Commitment (*Int_Higher*)
- Uninterrupted/Higher Goal Commitment (*UnInt_Higher*)
- Interrupted/Lower Goal Commitment (*Int_Lower*)
- Uninterrupted/Lower Goal Commitment (*UnInt_Lower*)

[14] Participants were instructed that the clients "…are generally conservative, and would prefer to avoid aggressive tax positions" OR "…would like to save on their taxes and would consider reporting aggressive tax positions."

[15] This approach is consistent with Kadous et al. (2003), but may raise concerns related to potential priming/demand effects. We address these concerns in the Alternative Explanations subsection of our Results section.

3.4. Dependent variables

We employed three primary dependent variables for the tax compliance recommendation ("hobby loss") task. *Level of Support for Deduction* measured the level of support that the participants believed the client's facts and circumstances and authoritative guidance provided for a deduct recommendation. *Prevail Against IRS Challenge* measured participants' perceptions of the chances that the aggressive (deduct) recommendation could be successfully defended against a challenge by the regulatory authority. *Professional Recommendation* captured the likelihood that participants would recommend that the client deduct the loss.[16] Table 2 describes the specific questions and scales we used to measure these dependent variables. Lastly, we measured one dependent variable related to the scheduling task: *Scheduling Task Accuracy* captured the percentage of participants in each condition who selected the appropriate date and time for the meeting with the client.

3.5. Control variables

In order to control for potential differences between groups that could influence the impact of task interruption and/or professional judgment, we captured demographic information related to each participant's age, gender, level of education, professional experience, hobby loss experience, frequency of exposure to interruption, and Basoglu et al.'s measure of interruption management ability (2009). These demographic measures are reported in Table 1. We also included three attention check questions that allowed us to identify participants who failed to carefully attend to the experimental materials. Each attention check question instructed participants to choose a specific scale response; six participants failed to select the appropriate responses and were excluded from the sample.[17]

4. Results

Table 2, Panel A presents descriptive statistics for the dependent variables, both overall and for each group. The patterns of dependent variable means for each experimental treatment (depicted graphically in Figs. 3–6) are directionally consistent with our theoretical expectations. Participants were also likely to recommend that the client deduct the loss (68/94 [72%] chose a deduct response, see Table 2, Panel B). This is consistent with relatively high overall levels of commitment to minimizing the client's tax liability and the ambiguous nature of the task (5.88 and 4.33 on 7-

[16] We employed a six-point scale to force participants to make a choice that falls on one side of the do not deduct/deduct decision.

[17] Given that we manipulated task interruption, and that our participants could have been exposed to external interruptions while completing our experimental materials, we took several steps to eliminate non-manipulated task interruptions. First, we instructed participants to ensure that they had 20 min of uninterrupted time to complete the study, and to eliminate potential distractions by turning off their cellphones and closing other programs on their computer. Secondly, we incorporated two accountability mechanisms to foster compliance with these requests: we informed participants that the information we obtained from their participation would not be useful for our research unless they complied with the preceding instructions and we also required participants to agree to do their best to comply with these instructions before they were allowed to begin the study. Thirdly, as part of the post-experimental survey, we asked participants whether they experienced any external interruptions during the experiment. One participant in the *Int_Lower* group did report that they experienced an external interruption while completing the experimental materials. The level of statistical significance of our hypothesis tests and supplemental analysis are unchanged when this participant's data are excluded, and our inferences remain unchanged. Any unreported external interruptions should be randomly distributed among participant groups, and any significant effect of unreported external interruptions should bias against us finding support for our hypotheses.

Table 2
Descriptive statistics for dependent variables associated with the participants' compliance recommendations and goal commitment.

Panel A: Treatment means and standard deviations for dependent variables

			Group[a]							
	Overall		Int_Higher		UnInt_Higher		Int_Lower		UnInt_Lower	
Dependent variable	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Level of Support for Deduction[b]	5.01	*1.73*	5.82	*1.29*	5.06	*1.76*	4.48	*1.58*	4.90	*1.29*
Professional Recommendation[c]	4.20	*1.44*	4.82	*1.13*	4.22	*1.77*	3.96	*1.34*	3.95	*1.15*
Prevail Against IRS Challenge[d]	5.01	*1.58*	5.88	*1.41*	4.97	*2.09*	4.68	*1.49*	4.75	*1.48*
Extent to Which Loss is in Gray Area[e]	4.33	*1.66*	4.18	*1.51*	4.19	*1.96*	4.28	*1.58*	4.75	*1.41*
Clarity of Authoritative Guidance[f]	4.93	*1.42*	5.71	*0.85*	5.28	*1.42*	4.36	*1.32*	4.40	*1.50*
Scheduling Task Accuracy[g]	71%		53%		75%		76%		75%	

Panel B: Number of deduct/do not deduct recommendations by group[h]

			Group							
	Overall		Int_Higher		UnInt_Higher		Int_Lower		UnInt_Lower	
Recommendation	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
Deduct (aggressive)	68	72%	15	88%	23	72%	18	72%	12	60%
Do not deduct (conservative)	26	28%	2	12%	9	28%	7	28%	8	40%
Total	94	100%	17	100%	32	100%	25	100%	20	100%

Panel C: Treatment means and standard deviations for goal commitment measures

			Group							
	Overall		Int_Higher		UnInt_Higher		Int_Lower		UnInt_Lower	
Goal Commitment Measure	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Goal: Minimize tax liability[i]	5.88	*1.18*	6.72	*0.33*	6.80	*0.26*	4.86	*0.98*	4.94	*0.98*
Goal: Justify recommendation[j]	5.75	*1.31*	6.53	*0.70*	6.55	*0.68*	5.16	*1.19*	4.54	*1.32*
Goal: Avoid IRS challenge[k]	5.97	*1.08*	6.53	*0.63*	6.45	*0.96*	5.60	*0.82*	5.16	*1.21*

[a] The group names indicate experimental treatments as follows: *Int_Higher* = Interrupted, High Goal Commit; *UnInt_Higher* = Uninterrupted, High Goal Commit; *Int_Lower* = Interrupted, Low Goal Commit; *UnInt_Lower* = Uninterrupted, Low Goal Commit.

[b] *Level of Support for Deduction* was captured as the answer to "What level of support do you believe the facts and circumstances provide with respect to deducting the loss?" on a seven point Likert scale ranging from "1 - Very Weak Support" to "7 - Very Strong Support".

[c] *Professional Recommendation* was captured as the answer to "How likely would you be to recommend that the Brooks deduct the $60,000 loss?" on a six point Likert scale ranging from "1 - Very Unlikely" to "6 - Highly Likely".

[d] *Prevail Against IRS Challenge* was captured as the answer to "If the Brooks DO deduct the $60,000 loss, and the deduction is challenged by the IRS during an audit, how likely is it that the Brooks' position could be successfully defended?" on a seven point Likert scale ranging from "1 - Very Unlikely" to "7 - Highly Likely".

[e] *Extent to Which Loss is in Gray Area* was captured as the answer to "To what extent do you view the decision to deduct the loss as falling into a gray area?" on a seven point Likert scale ranging from "1 - Not At All Gray" to "7 - Very Gray".

[f] *Clarity of Authoritative Guidance* was captured as the answer to "Given the facts and circumstances in the case, evaluate the extent to which the authoritative guidance provides clear direction about the appropriate recommendation." on a seven point Likert scale ranging from "1 - Very Unclear" to "7 - Very Clear".

[g] *Scheduling Task Accuracy* was the percentage of each group that provided the correct answer to the scheduling task.

[h] Participants recommendations were classified as *Deduct* (*Do not deduct*) if they fell on the upper (lower) half of the *Professional Recommendation* scale.

[i] *Goal: Minimize Tax Liability* was measured as the extent to which the participant agreed with the following goal: "Tax advisors seek to help their clients minimize their tax liability." Responses were captured using the five-item scale described in Appendix B. Factor analysis identified a single factor on which four of the five items loaded. The measures reported in the table reflect a composite goal commitment score comprised of an average of these four items.

[j] *Goal: Justify Recommendation* was captured as the extent to which the participant agreed with the following goal: "Tax advisors are often motivated to build a justifiable case to support their recommended tax position." Responses were captured using the five-item scale described in Appendix B. Factor analysis identified a single factor on which four of the five items loaded. The measures reported in the table reflect a composite goal commitment score comprised of an average of these four items.

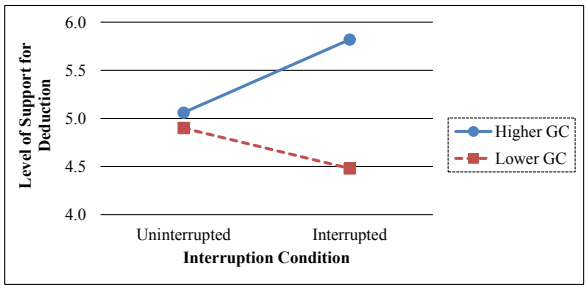
[k] *Goal: Avoid IRS Challenge* was captured as the extent to which the participant agreed with the following goal: "Tax advisors seek to help their clients avoid tax positions that will be challenged and disallowed by the IRS." Responses were captured using the five-item scale described in Appendix B. Factor analysis identified a single factor on which four of the five items loaded. The measures reported in the table reflect a composite goal commitment score comprised of an average of these four items.

point scales, respectively, Table 2, Panel C). Our median split on *Goal Commitment* yielded experimental groups that differed substantially with respect to mean commitment to the goal of minimizing the client's tax liability (Higher = 6.78, Lower = 4.89, $t_{92} = -12.94$, $p < 0.01$, two-tailed, not tabulated). Consistent with the GBC Model and motivated reasoning theory, we observe a simple main effect for *Goal Commitment* on participants' assessment of the level of support for the aggressive position (5.33 vs. 4.67, $t_{92} = -2.05$, $p = 0.02$, one-tailed, Table 3, Panel A), likelihood of successfully defending the aggressive position against a regulatory challenge (5.29 vs. 4.71, $t_{89} = -1.64$, $p = 0.05$, one-tailed, Table 3, Panel B), and likelihood of recommending the aggressive position (4.43 vs. 3.96, $t_{90} = -1.61$, $p = 0.06$, one-tailed, Table 3, Panel C).[18]

4.1. The effects of task interruption on professional judgment

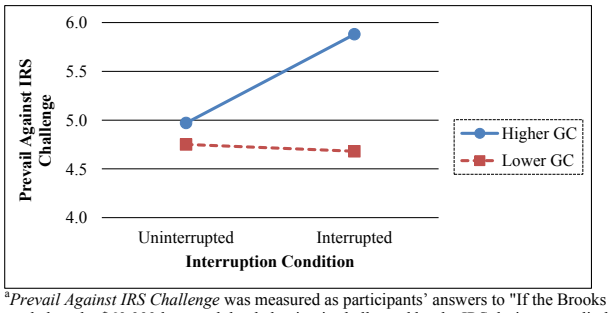
Hypotheses 1, 2, and 3 predict a specific form of interaction between task interruption and goal commitment. Therefore, we employ linear contrasts of cell means to test our hypotheses

[18] Although 94 observations were included in each *t*-test, in some cases, Levene's *F* revealed that the two groups had unequal variance. In these circumstances, we report the *t*-test associated with unequal variance, and its associated *df*.



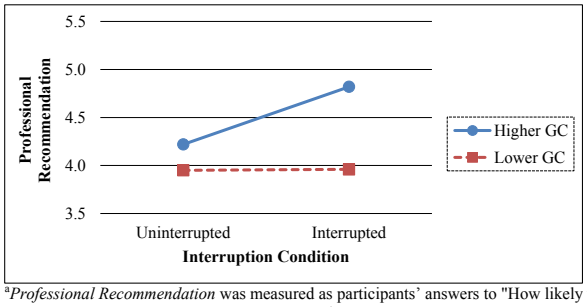
[a]*Level of Support for Deduction* was measured as participants' answers to "What level of support do you believe the facts and circumstances provide with respect to deducting the loss?" on a seven point Likert scale ranging from "1 - Very Weak Support" to "7 - Very Strong Support".

Fig. 3. Perceived level of support for the deduction by group.[a]



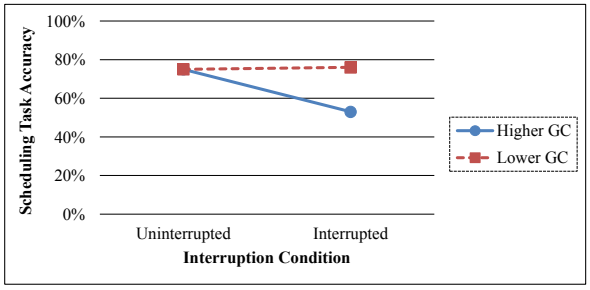
[a]*Prevail Against IRS Challenge* was measured as participants' answers to "If the Brooks DO deduct the $60,000 loss, and the deduction is challenged by the IRS during an audit, how likely is it that the Brooks' position could be successfully defended?" on a seven point Likert scale ranging from "1 - Very Unlikely" to "7 - Highly Likely".

Fig. 4. Perceived likelihood that the deduction could withstand an IRS challenge by group.[a]



[a]*Professional Recommendation* was measured as participants' answers to "How likely would you be to recommend that the Brooks deduct the $60,000 loss?" on a six point Likert scale ranging from "1 - Very Unlikely" to "6 – Highly Likely".

Fig. 5. Likelihood of providing an aggressive recommendation by group.[a]



[a]*Scheduling Task Accuracy* was the percentage of each group that provided the correct answer to the scheduling task.

Fig. 6. Percentage of participants providing the correct answer to the scheduling task by group.[a]

directly (Buckless & Ravenscroft, 1990). We utilize the following contrast weights: *Int_Higher* (+3), *Unint_Higher (+1)*, *Int_Lower (−2)*, and *UnInt_Lower* (−2) (Rosnow & Rosenthal, 1995).[19]

Hypotheses 1–3 predicted that task interruption would exacerbate the impact of tax professionals' motivated reasoning, and that this would be reflected in higher: perceived levels of support for the aggressive recommendation (H1 – *Level of Support for Deduction*), assessments of the likelihood that the deduction could survive a regulatory challenge (H2 – *Prevail Against IRS Challenge*), and likelihood of recommending an aggressive recommendation (H3 – *Professional Recommendation*). Furthermore, these hypotheses specified that the *Int_Higher* group would be highest, the *UnInt_Higher* group would fall in the middle, and that the *Int_Lower* and *UnInt_Lower* groups would be lowest on these measures. Table 3, Panels A, B, and C document that our contrast tests of H1 ($F_{90} = 6.49$, $p = 0.01$, one-tailed), H2 ($F_{90} = 5.27$, $p = 0.01$, one-tailed), and H3 ($F_{90} = 4.33$, $p = 0.02$, one-tailed) are statistically significant. These findings provide support for H1, H2, and H3, and suggest that when tax professionals are highly committed to minimizing the client's tax liability, the goal activation escalation induced by task interruption exacerbates motivated reasoning, biasing tax accountants' perceptions of the strength of the evidence in support of the aggressive compliance position (H1), and inducing confidence bolstering (H2), which compromises their ability to assess the risks associated with this position. Together, these effects cascade to affect their willingness to recommend the aggressive compliance recommendation (H3).[20]

4.2. Control variables

Although the planned contrasts reported above provide strong evidence in support of our first three hypotheses, they do not account for potential demographic differences between groups that could influence the impact of task interruption and/or professional judgment in our setting. Therefore, we tested whether the experimental groups differed with respect to these demographic variables by employing 4 × 1 ANOVAs and Scheffe's multiple comparison tests for the continuous control variables (*Age*, *Tax Professional Experience*, *Hobby Loss Experience*, *Task Interruption Frequency*, and *Interruption Management Ability*), and Fisher's Exact Test for our dichotomous control variables (*Gender* and *Education*).[21]

For the 4 × 1 ANOVAs, we used group as the independent variable and each covariate as a dependent variable. The results indicate that some of our experimental groups differed with respect to *Age*, *Hobby Loss Experience*, and *Interruption Management Ability* at $\alpha = 0.10$ (not tabulated); they did not differ with respect to *Tax Professional Experience* or *Task Interruption Frequency* (all $p > 0.20$, not tabulated).[22] Scheffe's multiple comparison tests revealed that participants in our *UnInt_Higher* and *UnInt_Lower* groups differed

[19] See Kadous et al. (2003), p. 771, footnote 11 for a discussion of why contrast testing is preferable to ANOVA given our hypotheses and experimental design.

[20] The dependent variables that we use to test H1–H3 are related (and highly correlated). However, we believe that there are important distinctions between them, and that presenting our results for each variable separately provides stronger evidence that our data are consistent with our hypotheses. We did conduct a factor analysis, and determined that these measures do load on a single factor. We replicated the contrast tests reported above using this factor as the dependent variable, and our results are qualitatively similar and our inferences remain unchanged.

[21] In order to perform this analysis, we dichotomized the *Education* variable such that it captures whether or not participants obtained a graduate degree.

[22] We looked for group differences at $\alpha = 0.10$ to help control for Type II errors.

Table 3
Initial statistical analyses of hypotheses.

Panel A: Analyses related to *Level of Support for Deduction*				
Goal commitment		*Higher*	*Lower*	
Mean *Level of Support for Deduction*		5.33	4.67	
Simple main effects of goal commitment	*df*	*t*	*p*[a]	
High vs. low goal commitment	92	−2.05	0.02	
Contrast ANOVA				
Source	*df*	*MS*	*F*	*p*[a]
Group	3	6.20	2.60	0.03
Error	90	2.38		
Hypothesized contrast	*df*	*MS*	*F*	*p*[a]
H1: IH > UH > IL = UL	90	15.46	6.49	0.01
Panel B: Analyses related to *Prevail Against IRS Challenge*				
Goal commitment		*Higher*	*Lower*	
Mean *Prevail Against IRS Challenge*		5.29	4.71	
Simple main effects of goal commitment	*df*	*t*	*p*[a]	
High vs. low goal commitment	89	−1.64	0.05	
Contrast ANOVA				
Source	*df*	*MS*	*F*	*p*[a]
Group	3	5.69	1.96	0.06
Error	90	2.91		
Hypothesized contrast	*df*	*MS*	*F*	*p*[a]
H2: IH > UH > IL = UL	90	15.32	5.27	0.01
Panel C: Analyses related to *Professional Recommendation*				
Goal commitment		*Higher*	*Lower*	
Mean *Professional Recommendation*		4.43	3.96	
Simple main effects of goal commitment	*df*	*t*	*p*[a]	
High vs. low goal commitment	90	−1.61	0.06	
Contrast ANOVA				
Source	*df*	*MS*	*F*	*p*[a]
Group	3	3.10	1.50	0.11
Error	90	2.07		
Hypothesized contrast	*df*	*MS*	*F*	*p*[a]
H3: IH > UH > IL = UL	90	8.94	4.33	0.02

[a] One-tailed.

on *Age* and *Hobby Loss Experience* ($p = 0.10$ and $p = 0.08$, respectively, two-tailed, not tabulated). Although we do predict and find differences between these two groups on our dependent variables, the primary focus of this paper is related to the differences between *Int_Higher* and the other groups.

Scheffe's multiple comparison tests also reveal that the *Int_Higher* group reported statistically higher levels of *Interruption Management Ability* relative to participants in our *Int_Lower* and *UnInt_Lower* groups ($p = 0.04$ and $p = 0.01$, respectively, two-tailed, not tabulated). Basoglu et al. (2009) find that individuals who score higher on *Interruption Management Ability* are less susceptible to the impacts of task interruption. Therefore, these differences should bias against us finding support for our first three hypotheses. Despite these differences, our hypotheses are supported.

With respect to our dichotomous control variables, Fisher's Exact Test reveals that our groups did not differ with respect to *Education* (all $p > 0.20$, not tabulated); however, they did differ with respect to *Gender* ($p = 0.05$, two-tailed, not tabulated). Specifically, there were different proportions of male and female participants in the *UnInt_Lower* and the *Int_Lower*/*UnInt_Higher* groups ($p = 0.05$ and $p = 0.01$, respectively, two-tailed, not tabulated). Although we do predict and find differences between two of these groups (*UnInt_Higher* and *UnInt_Lower*), the primary focus of this paper is related to the differences between the *Int_High* group and the other three groups. Therefore, we do not believe that the collective differences noted above have significant implications for the interpretation of our primary results.

However, to provide additional assurance about the extent to which the data fully supports our hypotheses, we evaluated whether these control variables exerted a significant influence on the dependent variables associated with H1 (*Level of Support for Deduction*), H2 (*Prevail Against IRS Challenge*), and H3 (*Professional Recommendation*). *Age* and *Interruption Management Ability* did exert a statistically significant impact on at least one of our dependent variables associated with H1–H3 at $\alpha = 0.10$; the remaining control variables did not have a statistically significant impact on our dependent variables (all $p > 0.20$, not tabulated). Therefore, we replicated our contrast tests for H1, H2, and H3 within an ANCOVA model that allowed for the inclusion of control variables, using *Age* and *Interruption Management Ability* as covariates. Table 4 documents that the contrasts for H1 ($F_{88} = 4.921$, $p = 0.01$, one-tailed), H2 ($F_{88} = 5.354$, $p = 0.01$, one-tailed), and H3 ($F_{88} = 4.950$, $p = 0.01$, one-tailed) are statistically significant, providing evidence that our results are driven by our independent variables, rather than by inter-group differences on our control variables.[23]

4.3. The extent to which tax professionals experience confidence bolstering

Recall that tax compliance recommendations are constrained by the justification requirements associated with professional judgment: tax professionals must be able to justify these recommendations in light of the client's facts/circumstances and the applicable authoritative guidance. Ambiguity allows for reasonable variation in professional judgment, and allows tax professionals to argue that their recommendations are justifiable, while allowing them to pursue their primary directional goal.

One potential explanation for the confidence bolstering we observe is that *Int_Higher* participants may have consciously exploited the ambiguity surrounding the task to provide justification for the aggressive tax compliance recommendation. Although any impact of task interruption on professional judgment would be non-normative, and would raise concerns about interrupted tax professionals' abilities to accurately assess the degree of ambiguity inherent in the task and the reasonableness of the justification for the aggressive compliance position, this approach would suggest that they recognize the risks associated with aggressive recommendations, and react rationally to the justification requirements. It would also suggest that they recommend the aggressive position because they believe it can be justified, rather than because it is the most appropriate recommendation.

Alternatively, task interruption may have induced highly

[23] We also replicated our contrast tests for H1, H2 and H3 including control variables that differed between at least two groups as covariates (*Age*, *Hobby Loss Experience*, *Interruption Management Ability*, and *Gender*). The contrasts related to H1 ($F_{86} = 4.571$, $p = 0.02$, one-tailed), H2 ($F_{86} = 5.112$, $p = 0.01$, one-tailed), and H3 ($F_{86} = 4.859$, $p = 0.02$, one-tailed) remain statistically significant (not tabulated), and our inferences remain unchanged.

Table 4
Contrast testing with covariates.

Panel A: Contrast tests with covariates for *Level of Support for Deduction*				
Contrast ANOVA				
Source	*df*	*MS*	*F*	*p*[b]
Group	3	4.16	1.84	0.07
Interruption Management Ability	1	4.03	1.78	0.09
Age	1	13.66	6.04	0.01
Error	88	2.26		
Hypothesized contrast with covariates[a]	*df*	*MS*	*F*	*p*[b]
H1: IH > UH > IL = UL	88	11.13	4.92	0.01
Panel B: Contrast tests with covariates for *Prevail Against IRS Challenge*				
Contrast ANOVA				
Source	*df*	*MS*	*F*	*p*[b]
Group	3	5.13	1.84	0.07
Interruption Management Ability	1	0.44	0.16	0.35
Age	1	16.09	5.76	0.01
Error	88	2.79		
Hypothesized contrast with covariates[a]	*df*	*MS*	*F*	*p*[b]
H2: IH > UH > IL = UL	88	14.96	5.35	0.01
Panel C: Contrast tests with covariates for *Professional Recommendation*				
Contrast ANOVA				
Source	*df*	*MS*	*F*	*p*[b]
Group	3	3.46	1.67	0.09
Interruption Management Ability	1	0.38	0.18	0.34
Age	1	2.58	1.24	0.13
Error	88	2.07		
Hypothesized contrast with covariates[a]	*df*	*MS*	*F*	*p*[b]
H3: IH > UH > IL = UL	88	10.26	4.95	0.01

[a] Covariates included Age and Interruption Management Ability.
[b] One-tailed.

committed tax professionals to engage in directional processing to such an extent that they believe the authoritative guidance clearly supports the aggressive recommendation, and thus the regulatory authority will not challenge the compliance position. Under these conditions, interrupted tax professionals perceive the deduct recommendation to be most appropriate (and therefore, not an "aggressive" position) and lower risk relative to a position that relies on the exploitation of ambiguity for justification.

These alternative explanations differ with respect to the extent to which motivated reasoning compromised interrupted tax professionals' ability to assess the risks associated with the aggressive position, and the extent to which they experience confidence bolstering. Recall that our compliance recommendation task was designed to be ambiguous. This provided tax professionals with the ability to exploit ambiguity to provide justification for the aggressive tax compliance recommendation (although the extent to which this justification is reasonable may be debatable). However, the ambiguity that was introduced precluded tax professionals from realistically arguing that the authoritative guidance provides clear direction with respect to the appropriate recommendation. Therefore, we contend that the tax professional's ability to assess the risks associated with the aggressive compliance position is compromised to a greater degree when they misassess the clarity of the authoritative guidance, relative to when they exploit ambiguity to satisfy the justification constraint. Although both scenarios may cause the client to adopt a tax compliance position that is misaligned with their risk preferences, the first scenario likely results in a larger risk assessment error. Furthermore, Boiney et al. (1997) provide evidence that motivated reasoning is instrumental. That is, individuals engage in motivated reasoning to the extent required to justify their preferred conclusion, within reason. In our setting, individuals could instrumentally exploit ambiguity to justify their preferred conclusion; however, arguing that the authoritative guidance clearly supports the aggressive compliance position is unreasonable, and would suggest that task interruption compromises tax accountants' ability to apply motivated reasoning instrumentally.

To evaluate these alternative explanations, we explored participants' relative evaluations of task ambiguity and the clarity of the authoritative guidance by measuring the extent to which they viewed the decision to deduct the loss as falling into a gray area (*Extent to Which Loss is in Gray Area*) and the extent to which they believed the authoritative guidance provided clear direction about the appropriate recommendation (*Clarity of Authoritative Guidance*). Inconsistent with exploitation of ambiguity, participants in the *Int_Higher* group reported that the task was least ambiguous (4.18), followed by participants in the *UnInt_Higher* (4.19), *Int_Lower* (4.28) and *UnInt_Lower* (4.75) groups (*Extent to Which Loss is in a Gray Area*, Table 2, Panel A). We replicate the linear contrasts we used to test H1–H3 using *Extent to Which Loss is in a Gray Area* as the dependent variable. The contrast revealed that the pattern of inter-group differences is not consistent with the pattern observed for H1–H3, and is statistically insignificant ($p > 0.40$, two-tailed, not tabulated).[24]

However, consistent with directional processing compromising tax professionals' ability to assess the extent to which the authoritative guidance supports the aggressive recommendation, and to engage in instrumental motivated reasoning, participants in the *Int_Higher* group perceived the authoritative guidance to be clearest (5.71), followed by participants in the *UnInt_Higher* (5.28) group (mean *Clarity of Authoritative Guidance*, Table 2, Panel A), despite the fact that these groups provided the most aggressive compliance recommendations. *Int_Lower* and *UnInt_Lower* participants perceived the guidance to be least clear (mean ratings of 4.36 and 4.40, respectively, Table 2, Panel A). We replicate the linear contrasts used to test H1–H3 using *Clarity of Authoritative Guidance* as the dependent variable. This contrast revealed that the pattern of inter-group differences is consistent with the pattern observed for H1–H3, and is statistically significant ($F_{90} = 14.676$, $p < 0.01$, two-tailed, not tabulated).[25]

Collectively, these findings provide evidence that the motivated reasoning induced by high levels of goal commitment and exacerbated by task interruption compromised tax professionals' ability to assess the risk associated with aggressive recommendations to a greater degree because they misassessed the clarity of the authoritative guidance, rather than exploited ambiguity to satisfy the justification constraint, resulting in more severe confidence bolstering. Furthermore, this suggests that the impact of task interruption on professional judgment is non-normative, not only because task interruption is not relevant with respect to professional judgment, but also because in our setting, it induces

[24] We replicated this contrast using an ANCOVA model and including the covariates that differed between groups; the contrast was not statistically significant ($p < 0.60$, two-tailed), and our inferences remain unchanged.
[25] We replicated this contrast using an ANCOVA model and including the covariates that differed between groups. The contrast was statistically significant ($p = 0.04$, two-tailed), and our inferences remain unchanged.

participants to react non-normatively to the justification requirement. We interpret these findings as evidence that task interruption compromises highly committed tax professionals' ability to engage in motivated reasoning instrumentally.

4.4. The effects of task interruption on interrupting task performance

Hypothesis 4 predicted that participants in the *Int_Higher* condition would perform worse on the scheduling task than participants in the other three groups. Table 2, Panel A documents that 53% of the participants in the *Int_Higher* group provided the correct answer to the scheduling task, while 76%, 75% and 75% of the participants in the *Int_Lower*, *UnInt_Higher*, and *UnInt_Lower* groups provided the correct answer, respectively. We conducted Fisher's Exact Test and determined that the proportions of participants providing the correct answer in the *Int_Higher* group were significantly different from the proportions in the other three groups at $\alpha = 0.10$ ($p = 0.06$, one-tailed).[26] This finding provides support for H4, and suggests that the high levels of goal activation escalation induced by task interruption interfere with cognitions associated with the interrupting task, reducing performance.[27]

4.5. Alternative explanations

We attribute our findings to participants' commitment to a directional goal and to goal activation escalation triggered by task interruption. An alternative explanation for our findings is that the participants in our *Lower* goal commitment conditions were highly committed to accuracy, rather than directional, goals. Therefore, we measured participants' commitment to two accuracy goals related to building a justifiable case to support their recommendation and to avoiding tax positions that will be challenged and disallowed by the regulatory authority (see Appendix B for specific items). Consistent with our approach for the *Minimize Tax Liability* goal, we created composite measures of goal commitment for each of our accuracy goals, *Justify Recommendation* and *Avoid IRS Challenge*. We report overall and group means in Table 2, Panel C. We conducted Scheffe's multiple comparison tests, which revealed that participants in the *Int_Higher* and *UnInt_Higher* groups were more highly committed to these accuracy goals than participants in the *Int_Lower* and *UnInt_Lower* groups (all $p < 0.03$, two-tailed, not tabulated).[28] Our findings are inconsistent with the alternative explanation proposed above. However, they are consistent with motivated reasoning theory, which suggests that strong accuracy and directional goals can facilitate the construction of justification for directional preferences, ultimately amplifying the impact of directional goals on judgment. These findings provide additional evidence to support the expanded GBC Model's predictions about task interruption's impact on professional judgment.

Two additional implications arise from these findings. First, we attributed our results to high levels of commitment to the tax minimization goal, which escalated in activation faster than other goals when the task was interrupted. Yet, participants we classified as highly committed to this goal also reported high levels of commitment to the two accuracy goals. Recall that the presence of strong accuracy *and* directional goals may exacerbate directional bias when the extensive processing fostered by strong accuracy goals facilitates justification construction (Kunda, 1990). This provides an alternative explanation for our results: it is possible that both directional *and* accuracy goals were highly activated subsequent to task interruption, and that the judgment effects we observe resulted from directional bias that was exacerbated by the ease with which individuals could justify the aggressive recommendation. Although our results related to the assessment of ambiguity and the clarity of authoritative guidance suggest that this was not the case, our data do not allow us to clearly distinguish between these explanations, and both may operate in our setting. However, we do not believe that these explanations differ with respect to the predictions arising from the expanded Goal-Based Choice Model in the context of professional judgment, the interpretation of our results, or the associated implications for practice.[29] We leave it to future research to determine the extent to which strong accuracy goals are required for task interruption to impact professional judgment.

Secondly, we attributed the impact of task interruption on interrupting task performance to increased attention residue induced by goal activation escalation associated with the directional tax minimization goal. To the extent that participants in the *Int_Higher* group were highly committed to the accuracy goals, the expanded Goal-Based Choice Model predicts that these goals will escalate in activation rapidly during the interruption interval. Therefore, they may have contributed significantly to attention residue during the interruption interval. Once again, our data do not allow us to distinguish between these explanations. However, we do not believe that these alternatives differ with respect to implications arising for practice, and we leave it to future research to determine whether high levels of commitment to multiple goals is required to produce significant attention residue.

There is also a potential alternative explanation for the differences we observe between groups on *Professional Recommendation* (H3). To generate sufficient differences in goal commitment, recall that we manipulated *Client Preference*. Although this factor is judgment-irrelevant with respect to *Level of Support for Deduction*, *Prevail Against IRS Challenge*, and *Scheduling Task Accuracy*, it does communicate the client's risk preferences, and therefore could exert a normative impact on *Professional Recommendation*. To address these concerns, we considered the extent to which client preference differed across conditions. Individuals in our *Int_Higher* and *UnInt_Higher* conditions were exposed to clients who preferred aggressive tax positions at approximately equal rates which are statistically indistinguishable (11/17 [64.7%] vs. 19/32 [59.4%]). Yet individuals in our *Int_Higher* condition were most likely to recommend an aggressive tax position. In addition, our *Int_Higher* participants perceived the level of support for an aggressive recommendation to be higher and the chances of defending an aggressive recommendation against regulatory challenge to be greater. Therefore, we attribute the judgment differences we observe in our contrast test of H3 between

[26] We conducted Fisher's Exact Test, rather than a chi-square test, because the expected values in some of the cells of our contingency table were less than 5. Under these conditions, the chi-square test is not suitable because its approximate distribution does not agree with the exact distribution (Larntz, 1978; p. 255).

[27] Participants required an average of 4.2 min to complete the scheduling task, yielding an interruption interval similar to that employed in prior research (e.g., 5 min in Bargh et al., 2001).

[28] In addition, the *Int_Higher* and *UnInt_Higher* groups reported statistically indistinguishable levels of commitment to these goals (all $p > 0.95$, two-tailed), and the *Int_Lower* and *UnInt_Lower* groups reported statistically indistinguishable levels of commitment with respect to these goals (all $p > 0.20$, two-tailed) (not tabulated).

[29] The justification requirements associated with professional judgment foster strong accuracy goals; therefore, we believe that the presence of strong accuracy goals is externally valid.

Int_Higher and *Unint_Higher* to the impact of task interruption (a judgment-irrelevant factor), rather than client preference (a potentially judgment-relevant factor).[30] Nevertheless, to the extent that client preference drives our results related to H3, our general conclusion that task interruption can bias professional judgment is supported by H1. The consistency of results across H1 and H3 provide additional support for this contention.

5. Discussion and conclusions

5.1. Summary of results

Consistent with our hypotheses, we found that task interruption amplified the impact of motivated reasoning on tax professionals' judgments, biasing these judgments and resulting in confidence bolstering. This was manifested in: (1) higher perceived levels of support for the aggressive recommendation, (2) higher perceived chances of defending it against a regulatory challenge, and (3) greater likelihoods that tax professionals would recommend an aggressive tax compliance position. Supplemental analyses provide evidence that a more severe form of confidence bolstering occurred: interrupted participants believed the authoritative guidance provided clear support for the aggressive tax position. This suggests that their ability to assess the risks associated with the aggressive compliance position was compromised, and that they did not engage motivated reasoning instrumentally. Furthermore, we found that task interruption reduced performance on the interrupting task. Our findings were conditional on high levels of commitment to a directional goal (minimize the client's tax liability); when individuals were not sufficiently committed to this goal, task interruption did not affect professional judgment.

We attribute these results to task interruption's effect on relative goal activation through the mechanism of goal activation escalation, and to attention residue associated with goal activation, as described by the expanded GBC Model. Collectively, these findings provide evidence that task interruption exacerbates the influence of motivated reasoning on judgment. This can be particularly problematic for professional judgments in the accounting domain, for which accuracy is important and primary goals are often directional. In addition, when individuals are highly committed to a goal, and the task is interrupted, the goal activation escalation induced by task interruption could generate significant attention residue, which reduces performance on the interrupting task.

5.2. Contributions and implications

The goal deprivation portion of the GBC model can account for many of the findings from the emerging literature on the impact of task interruption on judgment, yet this portion of the model has not been validated by research specifically directed to this end. This paper contributes to the extant task interruptions and accounting literature by extending the GBC Model to the domain of professional judgment in accounting, integrating it with motivated reasoning to explain the impact of task interruption on professional judgment, and providing initial evidence to validate many of its predictions in the context of a tax compliance recommendation. Our findings support the theoretical impact of goal deprivation on judgment proposed by the GBC Model, and demonstrate that it provides a firm theoretical foundation for future research in this area.[31]

From a practical perspective, this study provides initial evidence that task interruption, a ubiquitous factor in the accounting environment, can exert a systematic, non-normative, directional influence on accountants' professional judgments under conditions that commonly occur in practice (e.g., strong directional goals, ambiguous tasks, relatively short interruption intervals), and that it results in confidence bolstering. In the context of a tax compliance recommendation, inaccurately assessing the level of support for an aggressive compliance position, and/or the likelihood that it will withstand a regulatory challenge, can affect clients' understanding of the relative risks and rewards of the position, and they may take compliance positions that are misaligned with their risk preferences. When inappropriate judgments are discovered during the review process, costly inefficiencies associated with correcting these issues arise. When inappropriate judgments survive the review process, and are subsequently judged to be overly aggressive, significant consequences may accrue.

Furthermore, we expand the GBC Model to account for the impact of task interruption on *interrupting* task performance. We provide initial evidence that the goal activation escalation induced by task interruption reduces performance on the interrupting task when individuals are highly committed to a primary goal. Under these circumstances, task interruption functions as a double-edged sword by inhibiting both *interrupted* and *interrupting* task performance. An accurate accounting of the costs associated with task interruption should include the effects of interruption on both tasks; when the collective costs outweigh the benefits, individuals should seek to reduce or eliminate task interruptions.

Finally, we provide initial evidence to support the existence of a boundary condition suggested by the expanded GBC Model (see van Osselaer & Janiszewski, 2012; Hypotheses 2.9 and 14.2 [p. 268 and p. 283]). Specifically, we demonstrate that the level of commitment to a primary directional goal determines the extent to which task interruption interacts with directional goals to influence judgment. Participants in our *Lower* goal commitment conditions reported moderate-to-high levels of goal commitment (4.9 on a 7-point scale), yet task interruption did not exert a significant impact on their judgments. This suggests that the impact of task interruption on professional judgment may only be manifested when participants are highly committed to directional goals. Given the frequency with which accountants are interrupted while performing work-related tasks, and the serious consequences that could arise from inappropriate

[30] We also considered whether *Client Preference* might affect any of our response variables, or drive any of our results associated with H1, H2 or H3. First, we ran traditional 2 × 2 (*Interruption* × *Client Preference*) and 2 × 2 × 2 (*Interruption* × *Client Preference* × *Goal Commitment*) ANOVAs for each of the three dependent variables we used to test H1, H2 and H3. None of the *Client Preference* terms, nor any of the two or three way interactions between *Client Preference* and *Interruption* and/or *Goal Commitment* were statistically significant at $\alpha = 0.20$ (two-tailed) in any of the models. Furthermore, we split our data by *Client Preference* and reran our contrast tests to determine whether our ordinal interaction occurred more strongly in one client preference condition than the other. Given the loss of power induced by the smaller sample sizes, none of our contrasts were statistically significant, with the exception of the contrasts for *Professional Recommendation* ($p = 0.065$) and *Prevail Against IRS Challenge* ($p = 0.076$) when the client expressed a preference for *conservative* tax positions. These results do not provide support for the contention that *Client Preference* affects our response variables or drives our results for H1, H2 or H3, as the conservative client preference should bias against us finding statistically significant contrasts. Lastly, we reran the contrast tests we report in Table 4 and controlled for *Client Preference* (i.e., we added a main effect of *Client Preference* to the contrast ANCOVA). The two-tailed *p*-values associated with *Client Preference* were all over $p = 0.50$, and all three contrasts remained statistically significant at $p < 0.05$ (two-tailed).

[31] See van Osselaer & Janiszewski's Propositions 13 and 14 (2012, p. 283).

professional judgments, these findings are encouraging. However, prior research suggests that accounting professionals frequently operate with strong directional goals. Therefore, their judgments may be susceptible to the influence of task interruption in practice.

5.3. Limitations and future research opportunities

This study is subject to several limitations. First, although every effort was made to recreate the tax professional's decision environment, it was not possible to perfectly replicate an actual tax compliance recommendation decision, with all of the accompanying internal and external pressures. Secondly, our tax compliance task was relatively ambiguous, allowing for the possibility that participants could construct reasonable justification for the aggressive compliance position. The extent to which task interruption will influence professional judgments when desired conclusions cannot be reasonably justified is unclear. Finally, the GBC model suggests that the length of the goal deprivation period should moderate the impact of task interruption on judgment. We propose that this relationship may follow an inverted U-shaped pattern (see footnote 4). Therefore, it is possible that over shorter goal deprivation periods, even strongly held directional goals may not experience sufficient goal activation escalation to amplify the effect of task interruption on judgment. Conversely, over lengthier goal deprivation periods, individuals may be unable to sustain activation of the set-aside goal given inherent cognitive limitations, and task interruption may not amplify the impact of directional goals on judgment. In addition, the GBC Model's goal satisfaction component suggests that when individuals are able to satisfy the suspended goal while working on the interrupting task, its relative activation should decrease. This implies that the match between interrupted and interrupting tasks plays an important role in the impact of task interruption on professional judgment. These factors suggest that our findings should be interpreted carefully, and caution should be used when generalizing our results to other settings.

The recent emergence of the GBC model and its novel application to the impact of task interruption on professional judgment provides a number of fruitful avenues for future research. This is the first study of which we are aware to apply the GBC Model to the impact of task interruption on professional judgment; future research can determine the extent to which it describes this relationship across individual, task, and interruption-specific factors in the accounting domain. For instance, future research can consider how task interruption affects judgment for individuals with different incentives, directional goals and professional requirements (e.g., auditors, jurors, managers, regulators). Moreover, as noted above, our data do not allow us to determine whether our findings are the result of the presence of a strong directional goal, or the joint presence of strong directional and accuracy goals. Future research can examine this question. Finally, when the impact of task interruption is undesirable, future research can consider potential mitigating strategies (such as decision aids).

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Appendix A. The scheduling task

["As you finish up with the Brooks case" OR "While you are working"], you get a phone call you need to take from Alice Jones, a prospective client you have been trying to land for several months.[32]

Alice doesn't have much time to talk, but wants to set up an initial meeting next week to discuss the services your firm can provide. She is available as follows:

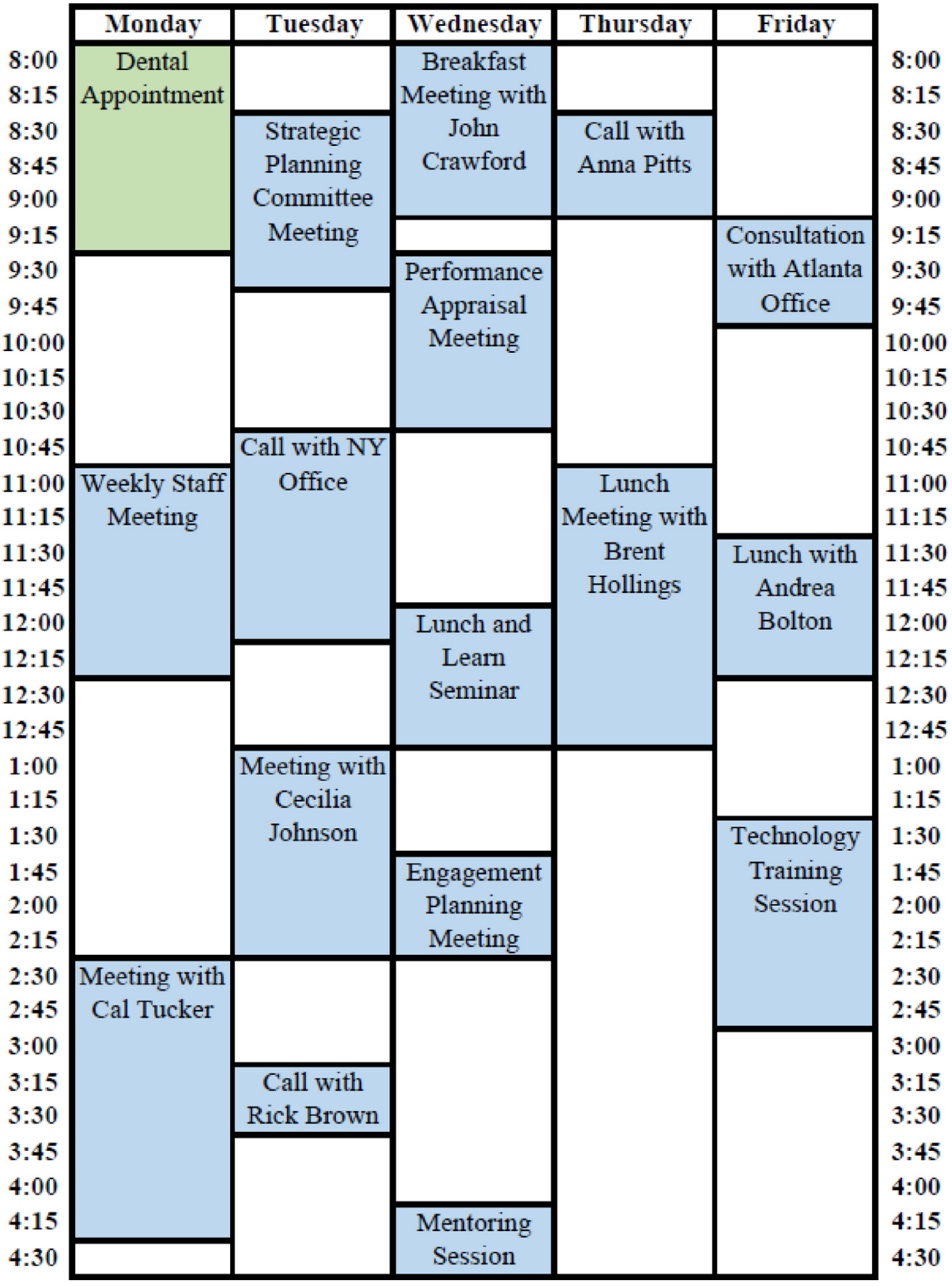
- Tuesday (9:15–11:30)
- Wednesday (2:15–4:15)
- Friday (10:45–2:00)

You tell Alice that you need to check your calendar, and that you will send her an email with the time that works for you shortly. Initial client meetings generally last 75 min (1.25 h). You hang up the phone, and it rings again. It is your dentist's office calling to remind you about your appointment first thing next Monday morning. After hanging up with the dentist, you pull out your calendar, which is broken down into 15 min increments. You realize that you had forgotten to record your dental appointment, so you go ahead and pencil it in from 8:00–9:30 a.m. on Monday.[33] Next, you turn your attention to finding a time that will work for your meeting with Alice.

INSTRUCTIONS: Use the calendar excerpt below to determine when you can meet with Alice without moving or canceling existing appointments/events (the white cells represent time that is currently unscheduled). Remember, Alice is available Tuesday (9:15–11:30), Wednesday (2:15–4:15), and Friday (10:45–2:00), and initial client meetings generally last 75 min (1.25 h).

[32] The first part of this sentence was dependent upon the participant's interruption condition. The text in the first (second) bracket was presented to uninterrupted (interrupted) participants.

[33] This was included to help our participants understand the calendar presentation format.


Monday
Tuesday
Wednesday
Thursday
Friday
8:00
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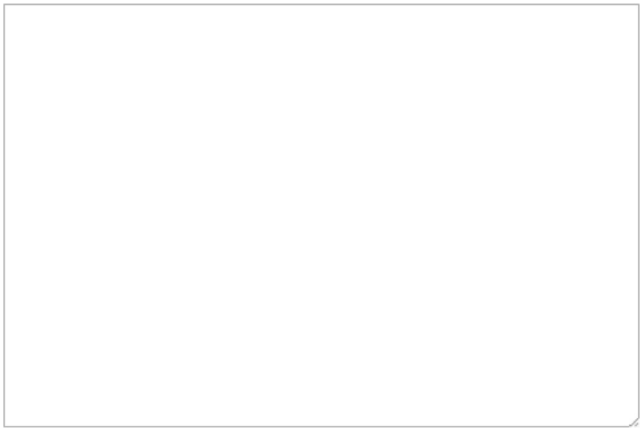
4:15
4:30
Dental Appointment
Weekly Staff Meeting
Meeting with Cal Tucker
Strategic Planning Committee Meeting
Call with NY Office
Meeting with Cecilia Johnson
Call with Rick Brown
Breakfast Meeting with John Crawford
Performance Appraisal Meeting
Lunch and Learn Seminar
Engagement Planning Meeting
Mentoring Session
Call with Anna Pitts
Lunch Meeting with Brent Hollings
Consultation with Atlanta Office
Lunch with Andrea Bolton
Technology Training Session

Now, compose a short email to Alice to schedule the meeting in the textbox below.
TO: AliceJones@JonesInc.com.
RE: Meeting Next Week.



When you have completed your email, you may "send it" by pressing the red button below.

Appendix B. Goal commitment measures[34]

GOAL: Tax advisers seek to help clients minimize their tax liability.

Please indicate your level of agreement with each of the following statements about this goal.

1. Quite frankly, I did not care if I achieved this goal or not. (R)
2. I was strongly committed to pursuing this goal.
3. It was hard to take this goal seriously. (R)
4. I thought this was a good goal to shoot for.
5. It would not have taken much to make me abandon this goal. (R)

GOAL: Tax advisers are often motivated to build a justifiable case to support their recommended tax position.

Please indicate your level of agreement with each of the following statements about this goal.

1. Quite frankly, I did not care if I achieved this goal or not. (R)
2. I was strongly committed to pursuing this goal.
3. It was hard to take this goal seriously. (R)
4. I thought this was a good goal to shoot for.
5. It would not have taken much to make me abandon this goal. (R)

GOAL: Tax advisers seek to help their clients avoid tax positions that will be challenged and disallowed by the IRS.

Please indicate your level of agreement with each of the following statements about this goal.

1. Quite frankly, I did not care if I achieved this goal or not. (R)
2. I was strongly committed to pursuing this goal.
3. It was hard to take this goal seriously. (R)
4. I thought this was a good goal to shoot for.
5. It would not have taken much to make me abandon this goal. (R)

Participants responded on a 7-point Likert scale ranging from "1 – Strongly Disagree" to "7 – Strongly Agree". Items 1, 3 and 5 were reverse-scored.

[34] These items were adapted from a scale employed by Kadous et al. (2003) to measure goal commitment in an audit context, originally developed by Hollenbeck, Williams, and Klein (1989) and refined and validated by Klein et al. (2001).

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