Processes of auditability in sustainability assurance – the case of materiality construction

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Abstract

This study examines how financial audit-styled concepts such as materiality are transferred to non-financial audit arenas. Drawing on a case study of assurors working within a Big 4 professional services firm, we uncover a number of interrelated features of the materiality determination and assessment process within sustainability assurance (assurance on sustainability reports). We illustrate how assuror flexibility, underpinned by assuror intuition, is central to uncovering assurance technologies deemed capable of addressing the materiality of ambiguous sustainability data. Assurors with no financial audit background retrospectively rationalise their intuition using the assumed authority of structured financial audit methodologies. This facilitates the tentative translation of financial audit knowledge to the sustainability assurance domain. Collaborative, holistic decision making processes inform the assurors' continual construction of materiality and are characterised by alliances of (accountant and non-accountant) 'expert' assurors merging formal and tacit knowledge. These alliances seek social cohesion within sustainability assurance teams in order to establish a social consensus among assurors around the materiality determination and assessment process. Our analysis develops and extends Power's theorisation of how new areas are made auditable and advances our understanding of the more practical aspects of non-financial assurance services offered by Big 4 professional services firms.

Keywords: Materiality, financial audit, sustainability assurance, materiality thresholds, sustainability reporting, auditability

1. Introduction

In recent decades there has been an increased demand for external assurance in domains other than financial audit (Power 1996, 1997a, Andon and Free 2012, Andon et al. 2014, 2015). This has led to the emergence of a number of unique assurance services in 'new audit spaces' such as efficiency auditing (Radcliffe 1998, 1999), e-commerce assurance (Gendron and Barrett 2004, Barrett and Gendron 2006), salary cap auditing (Andon and Free 2012, Andon et al. 2014), the assurance and ranking of league tables (Free et al. 2009, Jeacle and Carter 2011), and assurance on sustainability reports (sustainability assurance) (O'Dwyer et al. 2011). The demand for and supply of sustainability assurance in particular has grown substantially in the past decade as the number of companies issuing sustainability reports has increased (KPMG 2017, 2015). Major professional accounting bodies have fuelled this growth by promoting its practice among their members while the Big 4 professional services firms have established significant market share in this area (KPMG, 2017, 2015). A small stream of academic literature has studied the initial emergence of the sustainability assurance practices adopted by practitioners. This research has traced the early origins of sustainability assurance in specific firms (O'Dwyer 2011, O'Dwyer et al. 2011) as well as garnering wide-ranging perceptions on practice from both accounting and non-accounting sustainability assurance providers (Edgley et al. 2010, 2015). While prior work has opened up the black box of initial assurance practice (Humphrey 2008, Malsch and Salterio 2016), we still know little about how practice has progressed to address the challenges outlined in earlier studies, in particular the way in which financial audit-styled concepts have been translated by practitioners within this assurance domain (Power 1996, 1997a, O'Dwyer 2011, O'Dwyer et al. 2011, Andon and Free 2012, Andon et al. 2014).

One financial audit-related concept requiring translation by audit practitioners in new audit spaces is materiality. Materiality has traditionally been defined through the lens of financial reporting where it involves determining the importance of the disclosure of an item of information (or its omission) to users. Prior scholarship has explored what materiality is, how it is operationalised in financial audit, and the factors influencing management, auditors' and users' judgements (Estes and Reames 1988, Blokdijk et al. 2003, Messier et al. 2005, DeZoort et al. 2006, Ng and Tan 2007, Eccles et al. 2012, Keune and Johnstone 2012). The concept has, however, persistently evaded precise codification (Power 1997b, Edgley 2014), with numerous definitions produced by professional accounting bodies, common law and

statute, but none achieving complete agreement (Brennan and Gray 2005, Edgley 2014). Its meaning, according to Edgley (2014), "has not developed continuously over time but has been episodic, contingent on changes in the craft of audit, perceptions of investor needs, economic conditions and financial scandals" (p.268). This has led to the development of an inherently ambiguous concept (Power 1997a, Brennan and Gray 2005, Messier et al. 2005, Edgley 2014). This ambiguity is amplified when it is transferred to new assurance spaces.

O'Dwyer (2011) warns of the inherent difficulties involved in transferring financial audit based methodologies and underlying concepts to new assurance areas, especially when these areas are characterized by ambiguous qualitative data and are unsupported by environments suited to financial audit techniques. For example, most of the data in sustainability reports is not underpinned by the rigour of double-entry bookkeeping, thereby leading to different types of material misstatement risk. Moreover, there has been limited development of criteria to assist in assuring and determining the materiality of the narrative information prevalent in these reports (O'Dwyer 2011, Cohen and Simnett 2015). Yet, except for Edgley et al.'s (2015) 2007 study of assurors, prior research has not explored how the concept of materiality is constructed and framed by assurors working in this assurance space. Our study advances Edgley et al.'s (2015) initial work by exploring empirically how practitioners in a specific Big 4 professional services firm operationalised the notion of materiality in sustainability assurance engagements. This aims to provide us with a better understanding of how financial audit concepts are translated in the sustainability assurance arena.

We conduct a case study drawing on in-depth interviews with sustainability assurance practitioners in one Big 4 professional services firm, code-named JEL, to investigate the nature of, and the dynamics surrounding, the process of materiality construction in sustainability assurance. Our analysis is informed by Power's (1995, 1996, 1997a, 1997b, 2003) theorisation of the nature of practitioners' efforts to enact audit processes in different domains. Given the limited amount of empirical studies conducted in the area of evolving discretionary (i.e. not required by regulation) assurance services (see: O'Dwyer 2011, O'Dwyer et al. 2011, Andon and Free 2012, Andon et al. 2014), and especially into how financial audit-related concepts such as materiality are constructed and framed in these assurance spaces (Edgley 2014, Cohen and Simnett 2015, Edgley et al. 2015), our setting offers a unique opportunity to advance our understanding of practitioners' attempts to apply a working definition and frame to the notion of materiality.

Our study makes a number of contributions. First, our analysis develops and extends Power's (1995, 1996, 1997a, 1997b, 2003) theorisation of how new areas are made auditable. Specifically, we illustrate the process of auditability in sustainability assurance through the medium of materiality assessment. We show how assuror flexibility underpinned by assuror intuition facilitates the discovery of technologies deemed capable of offering assurance on non-financial data. Non-accountant assurors (CSR practitioners with limited or no financial auditing experience) mobilise structured audit methodologies, where possible, to retrospectively rationalise this intuition. These methodologies underlie judgements made in the presence of extensive ambiguity and aid the tentative translation of financial audit knowledge to the realm of non-financial assurance. We find that the tension between structure and judgement in the social construction of auditors' inference alluded to by Power (2003) is therefore largely allayed. Instead, collaborative, holistic decision making processes evolve, comprising alliances of (accountant and non-accountant) 'expert' assurors.

Second, we advance our understanding of the more practical aspects of evolving discretionary assurance services. This understanding remains in an embryonic state despite the recent increase in field studies examining these services (see: O'Dwyer et al. 2011, O'Dwyer 2011, Andon and Free 2012, Andon et al. 2014). Assurance concepts, such as materiality, depend on situated judgements to operationalise them. We examine this operationalisation through accessing assurors' perceptions in one Big 4 firm thereby enhancing our understanding of how assurors make key decisions in sustainability assurance engagements. More generally, our study contributes to the recent rise in interpretive studies exploring the back-stage of different forms of audit practice in their social and organisational contexts (see: Curtis and Turley 2007, Guénin-Paracini et al. 2014, 2015, Griffith et al. 2015, Johed and Catasus, 2018; Power and Gendron, 2015, Westermann et al. 2015).

Third, we advance prior work that has examined the operationalisation of materiality in sustainability assurance (see: Edgley et al. 2015). This work draws on individual assuror perspectives from both accounting and non-accounting assurance providers. In contrast, we examine one Big 4 firm context thereby unpacking how materiality is operationalised in a discrete environment. This allows us to uncover practitioners' struggles and rationalisations in practice in much greater depth in "the social context of [one] firm" (Carpenter et al. 1994, p. 355) as opposed to accessing broad conceptualisations of materiality from divergent contexts (see: Edgley et al. 2015). In particular, this enables us to explore how non-

accountant assurors and accountant assurors interact in a specific setting when seeking to operationalise materiality in sustainability assurance engagements[1] [2].

The rest of the paper is structured as follows. The next section draws on Power's theorisation of how new areas are made auditable to help us understand how materiality can be transported to new audit areas. This is followed by an outline of the research methods adopted in the study. A case narrative is then presented and discussed and the paper concludes with suggestions for future research.

2. Theoretical Context

2.1 Making new areas auditable

Sustainability assurance is one of the assurance services in 'new audit spaces' to emerge from the increased demand for audit-styled methodologies in non-financial audit domains (see: Power 1996, 1997a, O'Dwyer et al. 2011, Andon and Free 2012, Andon et al. 2014, 2015). In order to enable practitioners to audit these new spaces, an 'auditability' process is invoked. Power (1996, 1997b) theorises this process as one involving the iterative establishment of various formal and informal tasks and routines – termed 'audit technologies'- which practitioners refine through interactive trial and error processes involving significant negotiation and professional judgement (see also: Guénin-Paracini et al. 2014). This establishes a stable and legitimate knowledge base which is simultaneously applied to newly constructed audit environments (Power 1996, 1997b; see also Reed 1996). The audit technologies which emerge are eventually codified and formalized in methodologies aimed at generating an overarching structure to guide practitioners (Pentland, 1993). This supplies structure to the frequently negotiated, interactive and judgemental technologies but can cloud the influence of practitioner 'gut feel' and tacit knowledge (see also: Carrington and Catasus 2007). Power (1995) argues that such formalization incites conflict between practitioners' individual values, emphasizing the contingent, local, and tacit, and the institutional or organizational demands for them to engage in acceptable representations of practice (Power 1997a, 1997b). He notes how much of the work examining the social construction of auditors' inference exudes a "deep scepticism about the merits of structured audit approaches" (Power, 2003, p.390). A constant tension prevails between structure and judgement, resulting in the overt reliance on structure significantly impeding the use of individual judgement (see also: O'Dwyer 2011).

While Power (2003) argues that a trend towards greater structure in audit approaches is more concerned with obtaining legitimacy than leading to more efficient auditing, Humphrey and Moizer (1990) suggest that a more synergistic relationship between structure and judgement can exist. They find that structure can offer a framework for the exercise, and the provision of a legitimate rationale in support, of judgement. Power (1997a) also claims that the audit evidence gathering process (in our case, the process of operationalising materiality) is a form of credibility game requiring the continual construction of a social consensus to lend it support in order to render a new area auditable (see: Pentland 1993, Guénin-Paracini et al. 2014). Doubts and uncertainties can exist but are deemed surmountable through collaboration which allows for a certain level of ambiguity (Power, 1995). As Power (1995, 2003) observes, largely intuitive decisions can be rationalised and legitimized even where concepts are not fully understood.

Financial auditors seeking to render new domains auditable frequently mobilise practitioners from diverse disciplines to establish 'multidisciplinary audit' teams (Power 1997a, Swift et al. 2000, O'Dwyer 2011). Power (1997a, 1997b) contends that the complexity of coordinating these different functional specialities is frequently underestimated, as it is often erroneously assumed that the distinct technical procedures of different disciplines will endure within inter-disciplinary collaborations. Moreover, other relevant expertise may often be undermined or subordinated by financial auditors seeking to render new areas auditable with traditional financial audit knowledge being both transferred to *and* transformed within new audit arenas in an effort to dominate these domains (Abbott 1988, Power 1997a). For example, in financial audit-dominated contexts such as Big 4 firms, institutionally accepted techniques from financial audit may replace or relegate the expertise of non-accountant assurance experts. This allows financial auditors to claim territory over new audit spaces while invoking a form of external social control over other disciplinary experts essential to making new areas auditable. Within this process, these experts are valued more for the legitimacy they offer as externally recognized qualified experts than the detail of what they actually do (Power 1996, 2003). Hence, establishing trust in the competence and objectivity of *the specialist* rather than in their expertise, which could be considered 'alien' (Power, 1996: 37), may be of most value in the auditability process (Power, 2003).

Power (2003) maintains that the limitations of traditional auditor skill-sets mean that financial auditors have to reinvent themselves in order to make new areas auditable. Such re-invention of traditional auditors was illustrated by Radcliffe (1999) in his study of efficiency

auditing. Efficiency auditing was "seen as occupying a 'higher level' than attest work and "called for a different mode of auditing in contrast to the standardization of attest audit" leading to "audit work which was considered more challenging" (p.347). Traditional financial auditors, however, are not alone in this claim of having to re-invent themselves. For example, Andon et al. (2015) note how other experts also had to re-invent themselves in order to thrive in Big 4 environments. This re-invention required them to fully embody the 'rules of the game' valued in Big 4 firms and to comply with norms and expectations about the manner in which audit work should be performed therein (Pentland 1993). Hence, making new areas auditable may require a re-invention of *both* accountant assurors and non-accountant assurors.

2.2 The nature of materiality

A vital component of the audit process in new audit spaces involves operationalising the concept of materiality which has mainly been studied in the context of traditional financial auditing (Messier et al. 2005, Eilifsen and Messier 2015, Moroney and Trotman 2016). Materiality is relevant in auditing both in terms of planning the audit and designing audit procedures, and in evaluating whether the financial statements give a 'true and fair view' and comply with generally accepted accounting principles. The extent of testing is determined by the choice of materiality level that is applied (Brennan and Gray 2005, p.5). It commonly functions as a threshold that determines significant errors or omissions which are deemed relevant to the decision making of a set of users (Messier et al. 2005). However, even though it is a central concept within the craft of audit it has resisted precise codification in professional guidance (Power 1997a). For instance, materiality determination is commonly deemed a matter of professional judgement in financial audit within the materiality standards issued by bodies such as the Public Company Accounting Oversight board (PCAOB), the US Auditing Standards Board (ASB) and the International Auditing and Assurance Standards Board (IAASB) (Eilifsen and Messier 2015).

The positioning of materiality as a matter of expertise and professional judgement enables the concept to emerge as a product of professional power in the sense that it helps the profession to reassure the public about the quality of financial reporting and the substance of professional judgement (Edgley 2014, p.264). Levels of judgement can, however, vary significantly between auditing firms (Blokdijk et al. 2003) and numerous qualitative factors such as auditor experience and firm culture shape these judgements (Carpenter and Dirsmith

1992, Carpenter et al. 1994). Hence, decisions regarding materiality are not necessarily mechanistic and context matters considerably (Estes and Reames 1988, Edgley et al. 2015). Overall, the concept is often accused of being inherently vague and malleable (Power 1997a, Brennan and Gray 2005) in the sense that it: draws on multiple sets of knowledge, has been set up to protect investor capital, seeks to reassure the public about the quality of reporting and auditing, and is considered scientific yet pragmatic and flexible. Its purported enigmatic nature implies that the nuances of materiality judgements extend well beyond formal professional guidance (Edgley 2014, p.268).

A common feature of materiality is its explicit focus on users. This can be problematic as there is limited research on how materiality judgements are made by users and materiality threshold levels often differ between management, users and assurors (Messier 1983, Messier et al. 2005, Keune and Johnstone 2012). For instance, "how do preparers and auditors know what would reasonably influence decisions of users? Are preparers' and auditors' understandings of [materiality] the same or consistent with those of users of financial statements? Are preparers' or auditors' or users' understandings of [materiality] the same or consistent from preparer to preparer; auditor to auditor; user to user?" (Brennan and Gray 2005, p.3). These heterogeneous groups, according to Edgley (2014), "apply different thresholds because of their different motivations" (p.258). Auditors commonly use quantitative materiality thresholds as rules-of-thumb to assist in the evaluation of financial statements, which up until recently, went unreported[3]. Nonetheless, guidance from the SEC, IFAC and the AICPA highlights the need for careful consideration of qualitative factors that can make even very small misstatements material given their potential impact on key user decisions (Messier et al. 2005, DeZoort et al. 2006, Ng and Tan, 2007, Keune and Johnstone 2012). While such variation can exist, Edgley (2014) argues that different understandings must be resolved in audit, at least where decisions have to be justifiable in court.

Materiality is a central part of the purification ritual embedded in audit work that Pentland (1993) theorises, in that how materiality is operationalised influences the extent to which auditors deem a set of data to be "symbolically clean" (Pentland 1993, p. 607). Decisions regarding what is and what is not material and how materiality thresholds are established also influence, and are influenced by, the social cohesion within audit teams whereby group identities and values determine how materiality is conceived and mobilised. Decisions regarding how to approach materiality can also be shaped by social control within audit teams through which norms of behaviour regarding how work (regarding materiality) is

expected to be performed may be enforced in both subtle and explicit ways (Pentland 1993). In the words of Edgely (2014), we should view "materiality decisions as a performance by a group of actors, where expertises are drawn upon and ranked" which in turn "may broaden horizons within which materiality decisions are reached" (p.256). This is especially important as we now proceed to examine how materiality has been transported to sustainability assurance where we have a greater variety of actors and expertise.

2.3 Transporting materiality from financial audit to sustainability assurance

As assurance on sustainability reports has evolved, the materiality concept has been transferred and reinterpreted by auditors providing assurance on the content of these (and related) reports. However, there is very little research investigating how auditors tackle this reinterpretation (see: Edgley et al. 2015, Moroney and Trotman 2016). Guidance for practitioners has emerged that is frequently modelled on how materiality is conceived in financial audit. For example, the accounting profession distinguishes materiality in non-financial assurance from financial assurance in ISAE 3000. The guidance is much less precise than that for financial audits in that intended user groups are much broader and not as easily identified. Their needs are also not so easily ascertainable (Moroney and Trotman 2016). While quantitative thresholds are relatively precise in financial statement audits, ISAE 3000 does not allude to benchmarks but merely to the fact that auditors need to understand what issues might influence the decisions of intended users. Overall, the standard acknowledges that auditors must rely on incorporating inferences about users and qualitative factors to a far greater extent than in financial audit engagements (Moroney and Trotman 2016). Specific guidance on materiality in the context of sustainability reporting has emerged from consulting and nonprofit bodies, for example, the Global Reporting Initiative (GRI) and AccountAbility.[4] In this guidance, the concept of a materiality threshold is concerned with a wider range of issues, impacts, and stakeholders. This requires us to move beyond conventional approaches to identifying what is material (AccountAbility 2013). It is frequently claimed that in sustainability reporting, materiality is not limited only to those sustainability-related topics that have a significant financial impact on the organisation but also considers the economic, environmental, and social impacts on broader stakeholder groups (Eccles et al. 2012).

In an in-depth case study examining the construction of sustainability assurance services in two Big 4 professional services firms O'Dwyer (2011) highlighted the problems

confronting assurors when assessing the completeness of sustainability reports. When assurors sought to assess reporting completeness and relevance, internal struggles arose between the views of accountant assurors and non-accountant assurors in framing how materiality should be approached. This threatened the social cohesion on assurance engagements as non-accountants believed that financial audit technologies were frequently misleading when they were used to assess the completeness of sustainability reports. Moreover, the level of social control invoked by accountant assurors over the nature of the work to be performed in these engagements was repeatedly resented by non-accountant assurors. Non-accountant assurors were also much more likely to mobilise their intuition in assessing materiality. In light of the anxiety and uncertainty posed by completeness assessments, both firms sought comfort by publicly suggesting coupling traditional financial audit technologies focused on assessing 'hard numbers' with completeness assessments conducted by auditee-selected expert stakeholder panels. This downplayed the possibilities assigned to financial audit technologies in sustainability assurance while simultaneously positioning them as an essential part of the overall sustainability assurance process.

Edgley et al. (2015) investigated how a wide range of assurors working in 'accounting' and 'non-accounting' firms conceptualized and operationalised materiality in social and environmental reporting assurance engagements. They found that the meaning and role of materiality was significantly changed through the influence of a so-called 'stakeholder logic' in non-accounting assurance firms. In these firms, materiality was linked to a consultancy rationale and reflected their expertise at "providing advice about environmental systems" (p.27). Accounting assuror firms, on the other hand, were found to be more influenced by a professional logic that was "driven by a liability constrained market logic" (p.32) with materiality focusing on reducing assurance risks. These different logics were seen to encourage the development of different beliefs and practices about materiality, with understandings of materiality promoting a more forward-looking focus when assessing data. Edgley et al. (2015) also highlighted how 'non-accounting' assurors were critical of the caution adopted by assurors working in accounting firms, who they claimed preferred a 'systems-based approach to materiality' as opposed to the 'issues-focused' approach of those working in non-accounting firms. By focusing on the perspectives of a range of assurance providers, Edgley et al. (2015) provide broad conceptualisations of materiality from divergent contexts. However, we focus in depth on the potential synergies arising from interactions between non-accountant and accountant assurors as they seek to operationalise materiality in

a discrete, contextually distinct environment, that of a Big 4 professional services firm. Given that accounting firms have a tradition of financial audit expertise compared to non-accounting assuror firms, it is important to look at how this may impact on the potential synergies between accounting and non-accounting assurors in this specific context.

3. Research Method

The objective of this study is to extend and develop our understanding of the dynamics involved in the operationalisation of materiality by Big 4 practitioners involved in sustainability assurance engagements. To address this objective we conducted in-depth interviews within the sustainability assurance departments of one of the Big 4 professional services firms operating in the Netherlands and Belgium. We adopted an interpretive, qualitative research approach as this emphasises describing and understanding the meanings individuals assign to processes (Stake 2005, Cooper and Morgan 2008).

3.1 Case context

The Big 4 firm (JEL) was chosen as it represents one of the leading Big 4 professional services firms in the sustainability assurance field in Western Europe. Sustainability assurance is a subservice provided by the general sustainability department of the firm. Both the Dutch and the Belgian sustainability assurance departments of JEL have a range of national and multinational clients to whom they provide sustainability assurance services. These services consist of providing assurance (limited or reasonable) on all kinds of non-financial information (e.g. on sustainability or integrated reports, but also on greenhouse gas statements, and on biofuel processes). The sustainability assurance department of JEL Netherlands originated in 1998. In 2006, the Belgian department was created, originally with the exclusive objective of providing assurance on sustainability reports. In both countries the department consists of multidisciplinary teams comprising individuals with a financial audit background and specialist non-accounting/non-financial audit background (such as corporate social responsibility (CSR) advisors and technical specialists with an engineering background). A total of 18 people worked in the Belgian department and 10 in the Dutch department at the time of our study. Both departments are closely related and staff from both departments regularly work together on sustainability assurance assignments.

3.2 Interview evidence

A total of fourteen semi-structured in-depth interviews were conducted with sustainability assurors who had financial audit training and experience or were specialists in other areas. The former assurors are referred to as 'accountant assurors' (A1-A7) and include qualified financial auditors who sometimes undertake sustainability assurance engagements. The latter assurors are referred to as 'non-accountant assurors' (NA1-NA6) who are CSR practitioners with limited or no financial auditing experience (see Appendix 1). Seven interviews were conducted with accountant assurors working as assurors in the sustainability department and six with non-accounting sustainability assurance specialists (non-accountant assurors). An additional interview was undertaken with one of the managers originally interviewed (an accountant assuror) in order to follow-up on certain perspectives gained in his initial interview. The experience levels of those interviewed varied, with interviewees comprising those at the level of junior (3 interviewees), senior (3 interviewees), manager (3 interviewees), senior manager (2 interviewees) and partner (2 interviewees)[5]. Overall, the sustainability assurance experience of interviewees ranged from one year (juniors) to fifteen years (partners). Interviews were conducted with assurors in both the Dutch and the Belgian departments of JEL.

The interviews were conducted between March and July 2013. The aim of the interviews was to gain an understanding of the way in which assurors experienced the process of operationalising materiality in sustainability assurance engagements (Denzin and Lincoln 2000, Cooper and Morgan 2008). They began with a discussion of the existing guidance on assurance (and materiality therein). Assurors were asked to relay their experience of sustainability assurance engagements in JEL before moving into a more focused discussion of issues surrounding the construction of materiality within these engagements. A form of "reflexive interviewing" (Emsley and Kidon 2007) was undertaken in order to allow interviewees to pursue themes which were important to them in the context of the study's focus (Humphrey and Lee 2004, Gendron 2009). Eight interviews were conducted face-to-face. The remaining seven interviews, including the follow-up interview with one manager, were conducted through conference calls. All interview data was recorded electronically and transcribed in full[6]. All transcriptions were sent to interviewees for comment and additional comments and issues raised were noted and formed part of the overall analysis.

3.3 Data analysis

We analysed the interview transcripts using the protocols described by O'Dwyer (2004) and Huberman and Miles (1994). Our analysis was informed by extensive notes taken during and after each interview, post-interview discussions and reflections, and documents provided by our interviewees as well as by information available on the firm's website (Patton 2002). The first step of analysis (data reduction) involved the identification of core themes from the transcripts. This was achieved by the detailed reading and subsequent open coding of all interview transcripts (using the ATLAS.ti software package to record codes). A set of initial open codes matched to individual interviewees were grouped together in a matrix under core themes such as 'client reporting materiality', 'JEL reporting materiality', and 'element (reporting topic) materiality'. Subsequent readings of the transcripts together with repeated drafting, reanalysis, and interactions between the data and the key literature framing the study led to further development of these themes. The second step (data display) involved placing the core themes into matrices and displaying them with specific quotes from interviewees. A detailed thick description of the key themes and their interrelationships was then prepared independently by one author. This was subsequently scrutinized by the other two authors. All three authors then met face-to-face to discuss and debate this evolving description in the context of the prior literature examining and theorizing audit and assurance practice generally and agreed on an initial rough framing of the case narrative. This was the beginning of an iterative process of 'conclusion drawing' (the third step of our analysis) whereby all three authors went back and forth between the thick description, the supporting interview transcripts, and the key informing literature (namely, Power 1995, 1996, 1997a, 1997b, 2003), first independently and then collectively, in order to construct a rich draft narrative interpreting the way in which interviewees reflected on the operationalisation of materiality in JEL (see: Golden-Biddle and Locke 2007, pp. 47-60). We continually sought out contradictory patterns of explanations in the data that questioned the overall patterns emerging from our analysis (see: Lincoln and Guba 1985, Silverman 2010). This initial narrative underwent several iterations as we continuously moved between the narrative and the key informing literature until we reached agreement on a final case narrative. This is presented in the next section.

4. Case Narrative

In this section we present our analysis of the manner in which materiality was operationalised throughout the sustainability assurance process.. We structure our analysis around four themes which mobilise the core concepts discussed in section 2: (i) the adaptation of financial audit methodologies; (ii) the role of structure in supporting judgement; (iii) a collaborative and cohesive process of interaction; and (iv) the formation of an alliance of 'competing' experts. What became immediately apparent to us in our interviews was the difficulty interviewees had in defining materiality. While this struggle was not unexpected given the difficulties that have been shown to exist with materiality definitions in financial audit, it highlighted that interviewees' understanding of materiality was very much embedded in the many decisions they had to make throughout the sustainability assurance process. It was only by focusing on these decisions that they were able to articulate what materiality meant to them. In effect, they conceptualised materiality 'in the doing' (Power 1996, p. 306). These decisions revolved around answering questions about whether the auditee had identified all *material* stakeholders, reported on all *material* topics, and whether the resulting report was free of *material error*. Reflected in these decisions was affirmation of the need for materiality to be malleable (Brennan and Gray 2005). For example, materiality applied to both material issues in disclosures and significant errors or omissions in key performance indicators (KPIs). Such qualitative and quantitative aspects to the information required assurors to consider materiality somewhat differently. Materiality was also used as an adjective (Edgley 2014) to describe importance, for example, when referring to *material* stakeholders. Using the four themes identified above, we now present our analysis of the interviewees' conceptions of materiality when making these decisions.

4.1 The adaptation of financial audit methodologies

The operationalization of materiality within sustainability assurance in JEL was influenced by developments in financial audit. For example, the sustainability audit methodology (SAM) developed in JEL was '*derived from the control methodology of financial annual accounts [the global audit methodology GAM]' (A2)*[7]. It was widely recognised that the procedures in GAM required modification rather than transformation to make them suitable for the new context in which they were being used:

> *The level of 'turnover' may be material in financial audit [but] the percentage of sick leave is what we find important with this customer [in sustainability assurance]. That is how we [assurors] focus our work programme. (A1)*

Interviewees took comfort from what they considered to be well-developed procedures in financial audit in their translation of materiality to this new assurance arena.

> *In terms of audit development, I think we are getting much more in line with the financial audit. So, actually all the steps you take within a financial audit, we also take [in sustainability assurance] ... The developments in the area of auditing start with the financial audit. We find it comforting to see what happens there and we have to try and translate what it means for sustainability… We have very thick books [for financial audit] and the standards are abundantly clear… [but] not here [in sustainability assurance] (A1).*

While this financial audit influence may be unsurprising in a Big 4 firm, it was a subtle process which contrasts with prior work indicating that sustainability assurance initially evolved independently of financial audit in some Big 4 firms (see O'Dwyer 2011, O'Dwyer et al. 2011).

Similarly, when assurors were confronted with questions regarding how they decided on the magnitude of potential misstatements of quantitative reporting items that they were willing to accept, they leaned heavily on financial audit methodologies. Terms such as 'materiality thresholds' and 'tolerance levels for misstatement' came to the fore and were granted legitimacy because of their widespread usage in financial audit despite not being fully understood by the assurors, especially the non-accountant assurors. Materiality thresholds in general represent the dividing line between material and immaterial information and disclosure materiality thresholds distinguish between what is or is not separately disclosed in sustainability reports. When questioned about how they decided on the materiality threshold(s) to use, the non-accountant assurors floundered when trying to offer a clear explanation and gave the impression that the threshold(s) 'magically' appeared:

> *I don't actually know [where the materiality threshold is coming from]. I think that it is a sort of accountant's [financial auditor's] approach, ... a method that was always [used], a sort of habit (NA4).*

The non-accountants suggested we ask the accountant assurors, who they believed would '*probably know that better than [us]' (NA3).* However, when the accountant assurors were probed, they were also vague and indicated that thresholds were derived from *'team discussions with partners, managers, senior assistants, … with everyone on the team' (A2).* Such discussions are in-keeping with Power's (1995) observation that doubts and uncertainties can exist but they are surmountable through collaboration and they appeared to

be more extensive in sustainability assurance '*than in financial audit because a lot of the information is more subjective' (A6).* In financial audit they felt it was much easier because '*you have a certain percentage of pre-tax income as a threshold, for example' (A5)* or you are dealing with like-items that can be added together, whereas in '*sustainability reporting it [is not] recorded like that yet on the basis of clear numbers' (A5).* Individual accounts or accounting entries drove materiality in financial audit whereas in sustainability assurance the focus was first on the elements or topics that were important to the business.

> *With financial audit, you first determine the overall materiality and on the basis of that you determine significant entries. Here [in sustainability assurance] you determine significant [topics] and on the basis of that you calculate the materiality [related to them] (A2).*[8]

The nature of these elements was such that they could not simply be summed together in the way that accounts or accounting entries can be combined in financial audit and checked against some quantitative threshold:

> *With financial audit, you say 'materiality is a million, we have 20 errors, we add them up and then we get 1.3 million' ... So, okay, we disapprove. With us [in sustainability assurance] it is not that easy…on the one hand you have your core numbers, your KPIs and on the other hand you have the whole image of the report. And you have to assess the materiality of both. And you can't add it up of course (A1).*

As with financial audit, however, audit risk was seen to impact on the determination of materiality.

> *If you look at materiality, for example, within sustainability… every year you actually determine the material topics again. Of course, you do that on the basis of last year but at the same time you do that on the basis of the size of the amount and you look at where most risks are…If you know that each year they are messing with the CO2 calculation you will indicate a risk beforehand like, 'ok that CO2 calculation is never done properly. So, watch it and ensure to check that calculation' (A1).*

While recognising that the initial thresholds must have emanated from the financial audit methodology as they were not addressed in the sustainability assurance audit methodology, many assurors relied on vague references to team discussions and 'professional judgement' to support threshold decisions:

> *The percentages are indeed stated nowhere in our methodology. We determined this [5 per cent threshold] as a kind of default with our colleagues to gain more clarity. It obviously has to be discussed within the team whether this default is appropriate or has to be adjusted. In other words, professional judgment is used (A1).*

> *If you are looking at the correctness or the completeness of CO2 emissions, you need to have people there who have knowledge of CO2 (A2).*

Overall, the determination of materiality drew on developments in financial audit. While these procedures required some adaptation in the sustainability assurance arena, their widespread acceptance and usage among assurors in financial audit lent them legitimacy among non-accountant assurors in particular. The procedures surrounding the determination of materiality thresholds were one such example. These thresholds represented a significant 'zone of uncertainty' that was not clearly supported by official prescriptions and arrangements. However, the non-accountant assurors willingly complied with what they perceived as the norms and expectations regarding materiality threshold determination embedded in financial audit. These perceived norms and expectations exerted a form of social control over their work which enabled them to rationalize their decision making around thresholds even if the underlying logic driving the selection of thresholds occasionally puzzled them. The thresholds, although requiring some adaptation, were therefore accepted and afforded legitimacy by the non-accountant assurors because they were used in financial audit.

4.2 The role of structure in supporting judgement

In the same way that financial audit methodologies gave interviewees some comfort to support their professional judgement, the sustainability assurance methodology (SAM) also offered some structural support. For example, the SAM was seen to provide '*concrete*' (A3) assistance in the assessment of qualitative disclosures where the determination of materiality was more problematic than with quantitative disclosures and also required the exercise of professional judgement. With qualitative disclosures, assurors sought to purify subjective language in the reports by replacing it with 'objective facts' through ascertaining some level of proof. It was deemed important that *'the reader [did] not get the wrong impression of the text' (NA1)* as, for example, *'if you say "we are the best company in the Netherlands" you have to prove it' (A5).* This involved working through the sustainability report, line-by-line, and identifying all such subjective words, for example, 'best', 'first', 'safest', which were deemed material. These words had to be removed unless they could be verified or clarified in order to ensure that the reports did not *appear* subjective:

> *We select the subjective words in the report and we also try to be sure that the texts become objective and not too subjective because of the use of certain words. That is the risk for us, that the report presents a subjective view (NA1).*
>
> *If you have a building company and you say you are the biggest, are you then the biggest with regard to turnover, profit, employees, the garbage that you take away? … So, it really depends how someone who would be reading such a report … interprets that (A4).*

Assurors also had to pay specific attention to the nature and tone of the language used in the reports in order to ensure that it was not misleading or unbalanced for users. This evaluation of language was primarily concerned with the need for *nuance* and required assurors to exercise considerable professional judgement. Assurors sought to attain 'a feeling' as to what was material and may require amending, which assisted in determining differences in nuance in the text examined:

> *With qualitative [issues] you cannot set them against a numerical [base]. So, it is professional judgment and obtaining a feeling [by asking] 'does this really differ from reality or is it a difference in nuance?'… You cannot express a materiality threshold in numbers, so we must have some feeling for it (NA2).*

Efforts to *'steer the image of the reader in a certain way' (NA4)* or to report only on *'positive things' (A4)* were purified where possible:

> *It is also about how you write things down ... this is very influential for us in determining what we want to check ... Trying to steer the image of the reader in a certain way or make it more positive ... that they try to cut a corner that way and don't cover other things. So, we also look at that ... We are going to test materiality but [as part of that, we assess] how you write things down. So, on the basis of [this assessment] we are going to select things and challenge (NA4).*

> *You have to have balance in the report. For example, the company wants to come out as positive as possible but, at the same time, for stakeholders and society it is also important that negative things are also mentioned (A4).*

Hence, by alerting assurors to the issues related to nuance that they should look out for when reading text, the sustainability assurance methodology (SAM) provided broad, rather than prescriptive, structural assistance in making these judgements:

> *We have various [pieces of guidance] like 'pay attention to overly positive impressions in the text, pay attention to the balance [in the text]'. There are also negative things to be mentioned. 'Pay attention to the superlative and 'bigger than' and those kinds of things'. And 'pay attention to acknowledgments'. … Those are just concrete instructions if you start reading the text (A3).*

Another decision the interviewees faced was the determination of material stakeholders which was necessary as it enabled them to determine what these key groups considered to be material issues. This was not straightforward given that it was *'not written in any methodology how to judge who material stakeholders [we]re' (A5*) and assurors explained that sometimes it just came down to *'logic and common sense' (NA4)* or a *'feeling' (A7)* that all material stakeholders had been identified by an auditee. This 'feeling' was, however, always informed by the assurors' knowledge of the client and the industry:

> *Based on our experience and the relations we have with the client [auditee] we are able to think 'okay, who are the material stakeholders for this company?' (NA4).*

> *So, we try to keep track on the trends in ... at least the sector of the client. So, of course we already have this [stakeholder] analysis in mind (NA5).*

Many assurors expressed innate confidence in their ability to unpack the client's list of stakeholders and interrogate how it was developed. For some clients, such as insurance companies or banks, the assessment of material stakeholders was not seen as overly complex and it was *'relatively easy to see who the material stakeholders [we]re … without talking to the client' (NA4)*. Furthermore, drawing on their critical enquiry competencies provided them with additional confidence to challenge auditees on the appropriateness of the stakeholders they identified as material:

> *What I believe is important is that the client tests whether the stakeholders they believe are material are in fact effective stakeholders and whether they are interested in the company. It is possible that a company identifies suppliers and clients as stakeholders who are not interested at all in the corporate social responsibility (CSR) report or do not even read it … Well it might be an important group for the company as a whole but if they are only interested in the financial data of the company then it is not an important stakeholder on which the CSR report should focus (A7).*

Uncertainty did, however, sometimes surround the assessment of material stakeholders. This was exacerbated by the GRI guidelines that defined stakeholders as "those groups who have invested in an organization along with those who have *other types* of relationships with the organization" (GRI 2013, p. 92, emphasis added). The guidelines were accused of being somewhat '*light' (A5)*, too *'open to interpretation both for the client [auditee] and for the auditors' (A5)* and vague, especially with regard to what was meant by 'other types' of relationships and how assurors could determine that auditees had identified all of these relationships. Yet, even with their imperfections, the GRI guidelines offered assurors a certain amount of *'comfort that they could follow a known standard that [wa]s internationally recognised' (NA5)* and they were seen to be *'the best available norm' (NA3)* that could be used to inform their judgement.

Assessing *'whether [auditees] had been complete in their reporting' (NA6)* with all material elements included in their report required interviewees to place significant reliance on 'gut feeling' and intuition developed from undertaking the assignment previously:

> *What we notice is that when you have done an audit a couple of times then you develop a feeling with it … because it really is an intuitive story … that you get more of a sense for … It becomes clearer to [us] what we need [in order to determine completeness] and what we are looking for (NA1)*

This gut feeling and intuition was also supported by knowledge of the industry which they used in their assessment of the relevance of issues to an auditee's business, thereby echoing

AccountAbility's (2013) assertion that "what is important to the business" (p.10) should drive materiality in sustainability assurance:

> *[Paper usage], if you ask me, is not that material [for a bank] because it doesn't hit the key business or the key stakeholders of a bank. What is really material for a bank or insurer, besides the financial issues, is how contact is maintained with the customer. So customer satisfaction is material (NA6).*
>
> *It is much more interesting to know what [banks] invest in weapon deals, or to dictator-like countries. Those are relevant things to know… And while you are not able to attach some sort of amount to [them], you do know that those type of aspects are material for a company (NA4).*
>
> *[A bank including water usage in its report] is ridiculous because they are only using water to make coffee and flush the toilet. Look, if you are talking about a nuclear plant, they use billions of litres of cooling water, then I understand including something [in the report] about water (A3).*

Auditees, through stakeholder dialogue around their company's strategy, developed materiality matrices whereby they decide on '*the important topics to include in the report'* (A2). Interviewees considered this as a *'more scientific' (A7)* approach and offered greater comfort to assurors that the sustainability reports included all material elements and were more focused and complete.

> *The matrix is drawn up as follows…A company writes a strategy outlining everything that is of importance. The strategy defines their sustainability report. The company asks their stakeholders 'well what do you think of our strategy' and on the basis of that, they determine 'this is our reporting policy'. In effect, the strategy and the stakeholders determine what they [auditees] are going to report and that is what leads to the matrix. (A3)*

On some occasions, interviewees are present at these stakeholder dialogue meetings, while on other occasions they are not present but they receive detailed recordings of the meetings which they can then match against what is reported in the materiality matrix.

> *We ask to see the reports of the conversations with stakeholders. We ask to see presentations, minutes and conversation reports and then we look at whether it matches up with what we have seen in the materiality matrix. What you also see sometimes it that companies ask their stakeholders to fill in a questionnaire and then we ask for the filled in questionnaires for example. With some auditees, we are present at those stakeholder dialogues meetings, that doesn't always happen but sometimes it does. (NAI)*

The development of materiality matrices is encouraged by the GRI guidelines, which, while not mandatory, were used by interviewees to assess the quality of the matrix. For example, several interviewees noted that '*if [companies] do comply, then [the GRI guidelines] are our testing standard' (A1):*

One of the first steps we do is look at the materiality matrix, if they have one. We can then see what elements are important for a company, what are important elements for the stakeholders and how does it match up using industry analysis plus our own work experience on the sectors (A6).

I personally think it is more scientific … by setting up a materiality matrix the report can become more focused on the important themes and then the KPIs (A7).

The GRI guidelines indicate that you should do this, [pointing to a materiality matrix] which identifies all possible topics of interest to stakeholders, company stakeholders.. and we can see then [pointing to the matrix] if the topic it is included in the report (A1).

Overall, professional judgement and intuition prevailed in the assessment of material stakeholders, material elements and qualitative disclosures. Nonetheless, having some sort of structure to draw upon in the form of the GRI guidelines, however broad, and the SAM methodology, however imperfect, provided interviewees with a legitimate rationale to support and inform their judgements, while at the same time not restricting the exercise of these judgements.

4.3 A collaborative and cohesive process of interaction

Interviewees' confidence in their decision making was also reinforced by the high level of interaction and sharing of information that occurred at three levels: first, within the assurance team; second, between assurors and auditees; and third, between financial audit and sustainability assurance teams.

Interactions *within the assurance team* offered comfort to the assurors that all material elements that should be reported on were reported, or else were identified as missing by more experienced colleagues, thereby enabling subsequent follow- up with the auditee:

[T]here are colleagues who already have a number of years of experience with a certain client... I always do everything in conferral with them. If I, for example, have selected a lot of things in a draft report, things that I expect to see there … then I ask them if they agree. And then we always have a sort of review like 'okay are we complete in what we want to ask and did we, let's say, tackle all material things in the report?' (NA4).

These discussions were viewed as *'good conversations'* whereby *'all opinions and perspectives [we]re taken into account'* and led in the end *'to an agreement' (NA1)*. This removed some of the uncertainty and ambiguity surrounding what should be reported and brought the focus back to what was important to the user of the report and whether the issue would influence their decision making:

Interaction is important. You really look at, when does a user make a different decision, what is allowed to go wrong? So it is good to have that discussion, and say 'what is the impact' and perhaps 'if it's that small then you shouldn't spend so much time on it' (A1).

A sense of social cohesion within the assurance team interactions also helped assurors rationalize threshold decisions. For example, they admitted to often beginning with a 5 per cent error threshold as a default or *'*rule of thumb*'* for quantitative disclosures and then subjecting this threshold to debate within the team. If the issues were deemed core to the business, for example, *'safety in an oil rig' (NA6)*, the threshold was lowered accordingly:

> *You establish those [materiality thresholds] and then you can eventually say that during the audit you can quickly adjust them on the basis of the information that you receive… Normally, we take 5 per cent as a default. And then at the moment when it's a really important topic, 2 or 3 per cent … At the moment that it is not a material topic it can go up to 10 per cent (NA1).*

Thresholds were abandoned by the assurors if an error was such that they felt the information reported would give a *'different impression to the reader' (NA4)* or result in *'a user making a different decision' (A1).* This is not dissimilar to the common principles of materiality reported by the participants in the Corporate Reporting Dialogue (2016) instigated by the International Integrated Reporting Council (IIRC) whereby information is deemed material "when it is capable of making a difference to the evaluation and analysis at hand" (p.3).

> *Look, accidents are very important for a harbour company … so even an error of one would be material if it gives a different impression to the reader (NA4).*
>
> *It's like a company like Shell, they would really like to have zero accidents because it's really bad for their reputation, so if an accident has happened and that makes the news, and if you have made a mistake in that kind of information then it's crucial for your company. So, in this case I wouldn't agree to even a small misstatement (NA6).*

In most instances, discussing such material inaccuracies with auditees, the second level of interaction, did not involve *'difficult conversations' (A5).* Most auditees wanted their sustainability reports to be interesting and transparent and understood that assurors had their own standards to follow and would not sign off on their report unless they were satisfied that the information was materially accurate and complete in the company's sustainability report:

> *Clients [auditees] want to make something interesting and transparent and they understand that this is important. They also understand that if they don't do it, it will have a bad influence. So the discussion is possible with the client and they also listen and, of course, we also have to listen and understand why. But of course we follow these [internal] standards and if it is not okay, well, we are not going to say it is okay (NA5).*

Auditees would willingly adjust the report and applaud the assurors for finding the errors:

> *I reckon they [auditees] would rather have it [an inaccuracy] corrected themselves ... I have never come across problems in that area. To be honest, they are quite willing. They are rather likely to say 'well spotted' (NA4).*

> *If you say 'that doesn't make sense' they are very eager to leave things out of the report or adjust it (A5).*

In some instances, however, interviewees described the process as involving *'endless bickering about words; if something is 'not good', is it 'bad'? Or if something is 'bad', can you write that it is 'not good'?' (A3).* Such discussions were not always welcomed by auditees and could *'drive them a bit crazy' (A3).*

The extent to which assurors felt they could push back in the discussions above was, influenced by whether JEL was also the financial auditor of the client. This requires us to consider a third level of interaction, between the financial audit team and the sustainability assurance team. Sometimes, the sustainability assurance team were forced to back down in these discussions and had to become more pragmatic in their assessment of materiality. Otherwise, they risked upsetting the client and consequently the financial audit lead partner. This was a tricky balancing act given the huge differential in fee income between the financial and sustainability audits:

> *So suppose that I audit the sustainability report of a client, and my colleague audits the annual [financial] report. And I get into an argument with the client about the sustainability report ... which is [a] voluntary [report]. Then the client will perhaps say to the partner auditing the annual [financial] report, like 'listen, you don't have to come back next year… that moaning about the sustainability report'. That can jeopardize our independent position (A3).*

While the provision of both financial audit and sustainability assurance to the same auditee could work to the assurors' disadvantage by placing them under pressure to behave in a particular way so as not to lose audit fee income, it also had the potential to lead to the delivery of more efficient and higher quality assurance services. For example, the sustainability assurance team would liaise frequently with their colleagues involved in the financial audit of the same auditee in order to assess the completeness and accuracy of the material topics identified by the auditee in its sustainability report. They showed little concern for the maintenance of 'Chinese Walls' recommended in financial audit and if anything, the opposite was advocated through the continual sharing of information across assurance domains:

> *We are trying to integrate a bit so that we don't do duplicate work because that doesn't make sense. For example, a waste company, the tonnes of garbage that we [sustainability assurors] have seen are the same tonnes of waste that the financial [audit] team has seen. And the financial [audit] team often has performed some work on that … We try not to do the audit work twice but look at what the financial [audit] team has already done. [It also works] the other way around, sometimes the financial [audit] team looks at what we have done (NA1).*

You can use certain work from each other. For example, in the sustainability report things are being said about personnel and for the annual financial audit we check personnel registrations, so it is very simple to add little steps to that (A3).

Increasing collaboration between the financial audit and sustainability assurance teams contributed to more effective materiality assessments and an enhanced sense of comfort among sustainability assurors in particular:

[Sustainability assurors] identify risks … and then we also look together with the financial audit team at which risks they have identified. And they complement each other because we view the company from a different [angle] while the financial [audit] team views the company from a closer [angle] … That is good because it provides more complementary information….You do notice that [both teams] are coming together a lot more where there were two separate [audit] teams [financial and sustainability] two years ago… We confer more with each other… and we share knowledge about the organization … It keeps getting better… [and] sometimes we even have one [audit] report [with the financial audit team] (NA1).

Overall, our interviewees offered the impression of an interactive, collaborative process that brought confidence and cohesion to their decisions surrounding materiality. These interactions operated not only within the assurance team and between assurors and auditees but also between the financial audit and sustainability assurance teams. The latter interaction promoted benefits that underplayed the necessity for 'Chinese Walls' deemed essential in financial audit.

4.4 The formation of an alliance of 'competing' experts

Working together and sharing information within the assurance team also emphasized the distinctive skillsets of accountant and non-accountant assurors and helped to further unpack the meaning of materiality for them. Accountant assurors portrayed themselves as *'old conservative men, very held back, where everything is scary' (A1)*. They were primarily concerned with *'strictly following the rules' (A3)* which meant that they were *'thinking less' (A3)*. However, paradoxically, it was also widely felt that they could *'take a helicopter view [on what was material] more easily than someone who is very much in the CO2 world [a CSR/sustainability specialist]' (A1)*. Non-accountant assurors were characterized as having *'innovative young minds' (A1*) which were less concerned with rules. They were considered more flexible and insightful in their approach to materiality as they focused more on the *'consequences' (A3*) of errors for stakeholders as opposed to the magnitude of errors *per se*:

You have three different profiles of experts [in a sustainability assurance team]: the engineers, the prior financial auditors, and then the ones with a more general background - a legal

background or a more sustainability-oriented background. I think the last category is less strict [when judging the materiality of topics]. Financial auditors are more used to [assessing] fixed values. I think that they are less flexible in [their judgments]. If it is decided that we won't accept a 3 per cent error margin, then they just don't accept it. Whereas someone with a somewhat different profile would think more like, 'is that 3 per cent really that important for this specific KPI? … Otherwise, I will [not] adjust it'. If later on it is substantiated [then] good enough, there is always enough margin to allow for a certain error (NA6).

I don't have a financial background so I always like it if I have someone on the team who does have a financial background because that person is viewing [materiality]… in another way (NA1).

This combination of skillsets between accountant and non-accountant assurors was viewed as a *'powerful' (NA3)* resource which facilitated *'a more holistic' (A7)* approach to the determination of materiality. Each member of the team had a specific but valuable role to play in what was recounted as a consensual team effort rather than a conflictual process. For example, accountant assurors were seen as strong at assessing whether the process of determining a materiality matrix was *'solid' (NA3)* and *'completely documented' (A7)* while non-accountant assurors focused more on the output from this process in terms of whether *'this picture is correct' (NA3)* or whether the *'formulae'* underpinning the numbers were *'correct' (A7).*

I believe very much in the combination. And that is also the power I reckon in our team within [JEL]. We have a team here with … a person who knows a lot of GRI and integrated reporting ... There is a person who really has auditing as a core competency and there is a person who has technical competencies. Yes, those three, that is fantastic. That is also a very powerful team. (NA3).

The highly specific skillset of the non-accountant assurors contributed fundamentally to the materiality determination process. For example, interviewees were quite specific about the exact nature of this skillset and the central role it played in assessing reported data and its materiality:

I don't believe that if you have a team with only financial accountants that they can, in a credible manner, write a sustainability report... because a financial accountant is used to looking at financial data but if you are talking about ozone depleting substance, about volatile organic emissions, about chemical oxygen demand, how can an accountant do analytics on that? That's not really possible. In our teams we have specialists who only focus on CO2, energy or biodiversity. So not even CO2 and energy but CO2 or energy. I believe that it is very powerful to get a specialist on certain themes and to put them next to the competencies of financial auditors (NA3).

I think that people with a technical background can verify the content of KPIs… say particularly for industrial environments where waste emissions etc. are being calculated. For that we use technical people and they work under a control methodology. The methodology … is driven by people with an accounting background, an audit background. It is really a mixed team of auditors and engineers that are needed. The engineers are technically very good, not just to check on formulae but also to check that the inputs into the formulae are correct. But the

documentation and the methodology of how are we going to determine the completeness of certain technical KPIs … that requires accountants. That is the importance of teamwork (A7).

The nature of the interaction between the accountant and non-accountant assurors, while highlighting their distinctive skillsets, also assisted in establishing social cohesion in teams where respect was shown for one another's experience. Contrary to prior work (see O'Dwyer 2011), non-accountants did not appear to feel threatened or marginalized. Indeed, they were highly valued by many of their accountant assuror colleagues who continually alluded to the unique skills non-accountants possessed, to the depth of their insights, and to the way accountant assurors could learn from them:

[Name of key interviewee] is an example of someone who is not an accountant, [she/he] attended an international business school and after that specialized in that whole story around sustainability reporting. Well, [she/he] can perhaps do an audit even better than the average similar manager in the financial [audit] corner, whereas [she/he] never studied to be an accountant (A3).

For me [the participation of non-accountants] provided me with more depth [and] more insight. Because you also start to think like 'why do [companies] write it down like that [in the sustainability report]?' It provided me with more depth also in my normal annual [financial] audit work (A3).

In summary, we uncovered an alliance forming between accountant and non-accountant assurors. They respected each other's unique expertise and operated collectively to construct a social consensus around the materiality determination and assessment process. The knowledge and expertise of the non-accountant assurors was rarely sub-ordinated by the accountant assurors but was seen as having an integral role to play in the materiality determination and assessment process. While traditional financial audit knowledge was transferred to this new domain, it was not transformed therein but, instead, was tentatively translated. Both types of assurors felt in no sense threatened by their differences and instead viewed their diversity as contributing to a more informed and assured determination of materiality. Each had a role to play and neither assuror felt the need for any form of reinvention.

5. Discussion

Our analysis shows how the evolution of sustainability assurance within JEL had matured to the extent that non-accountant and accountant assurors largely saw themselves engaged in a collaborative, synergistic process aimed at collectively constructing materiality. Materiality was largely defined and constructed 'in the doing' (Power 1996, p. 306). The tensions evident in the Big 4 firms studied by O'Dwyer (2011) and in the distinct approaches to assurance in 'accounting' and 'non-accounting' firms uncovered by Edgley et al. (2015)

were rarely evident. This lack of tension is perhaps unsurprising given that we are studying one specific firm, a Big 4 professional services firm, and sustainability assurance in the Big 4 is now much more evolved than it was in 2006, the year that most of the data was collected for the O'Dwyer (2011) study. Hence, in contrast, both assuror types respected and sought to draw on each other's unique knowledge base. Moreover, the non-accountant assurors willingly embraced the overarching financial audit methodology, while not fully understanding it, and sought to fit their own loose, tacit conceptions of materiality within the financial audit frame they were required to work within. The methodology offered them a degree of comfort which they felt enabled them to cope with the uncertainties and ambiguities associated with making materiality assessments. It also offered them a convenient means of retrospectively rationalising intuitive decision making which was essential in allowing them to present themselves as competent in the new assurance environment (see, Power 1995, p.328). In this way, this process demonstrated that the establishment of order within the assurance process "was the product of *both* tacit and formal knowledges which [we]re combined to create comfort" (Power 1995, p.328, emphasis added) about materiality assessments.

Aspects of our analysis support Power's (1997a) contention that in new audit spaces the audit evidence process represents a type of credibility game involving the continual construction of a social consensus to offer it support and render a new area auditable (see also: Pentland 1993, Guénin-Paracini et al. 2014). First, the process of constructing materiality was one in which assurors sought out possibilities and engaged in collaboration, while fully responding to the unique nature of the task they were faced with. Even though doubts and uncertainties existed they were seen as surmountable, often through engaging in collective, informal efforts whereby materiality assessments were conducted "within admissible levels of ambiguity" (Power 1995, p. 327). Comfort and credibility were attained through a rationalisation process shaped by the social cohesion within the multidisciplinary audit teams and by the established social control mechanisms in JEL. As with Power's (1995, 2003) observations on statistical sampling, largely intuitive decision making on materiality levels was rationalised and legitimized using the language of thresholds and tolerable error even if these concepts did not seem to be fully understood.

Second, within the rather fluid and opaque efforts to determine materiality thresholds non-accountant assurors afforded extensive credibility to the institutionalisation of the thresholds notion embedded in financial audit methodologies. They appeared to succumb to

the perceived authority and mystique surrounding the accountant assurors' automatic adherence to the notion of thresholds, without necessarily confronting the possible lack of easy transfer of the threshold concept to the assurance of non-compulsory qualitative disclosures. Overall, the non-accountant assurors exhibited a limited level of critical reflexivity in this regard. As Power (1997b, 2003) contends, the threshold determination process was regularly improvised, with vague intuitions about threshold levels being rationalised and presented as cognitive (see, Power 1996) in what often appeared to be "essentially unknowable situation[s]" (Pentland 1993). For example, materiality thresholds of 2 per cent, 5 per cent and 10 per cent were offered as rather off-the-cuff percentages, sourcing their legitimacy from their institutional acceptance in the financial audit domain. The non-accountant assurors also sought to make this process credible *to themselves* through the continual reassurance from colleagues in team discussions focused on achieving closure on threshold levels (see also: Guénin-Paracini et al. 2014). However, they were unable to clearly articulate the decision making processes that led to the ultimate choice of specific thresholds.

Our analysis refines Power's observations on processes of auditability in four ways. First, Power (1997a) argues that other forms of expertise are almost always subordinated by accountants seeking to render new areas auditable. Within this process, a new configuration of expertise is seen to emerge in which accountants dominate. For example, Power (1997a) notes how in environmental audit traditional financial audit knowledge was both transferred to *and* transformed within the environmental audit domain. However, we uncovered little evidence of the transformation of traditional audit knowledge. Instead, we found a tentative *translation* occurring where, in the process of addressing materiality in the sustainability assurance domain existing audit knowledge and techniques were lightly adapted to fit this new domain, often by non-accountant assurors. No new configuration of expertise evolved as part of a competition for hierarchical precedence (Power 1997b, p. 78). The collaborative working relationship we uncovered fused the accountant assurors' relatively rules-based approach with the more flexible orientation of the non-accountant assurors and contributed to a holistic operationalisation of materiality, albeit one that was continually evolving. This helped to create *an alliance* of 'expert' assurors operating collectively to construct a social consensus around the materiality decision making process even as they struggled to make sense of how they reached decisions (see: Power 1995). The non-accountant assurors were consequently seldom coerced into the category of sub-contractable expertise as they were frequently central to joint decisions surrounding materiality. Moreover, the tools and

techniques of financial audit were not *exclusively* brought to bear on the determination of materiality as the accountants' recognition of the competencies of non-accountants represented an explicit acceptance of their core competencies when it came to certain (qualitative) report content. Therefore, in non-traditional assurance arenas, such as sustainability assurance, non-accountant assurors may not necessarily compete with accountant assurors but can collaborate with them and, in this way, contribute to more enhanced and holistic decision making processes.

Second, Power (2003) suggests that the limitations of traditional auditor skill-sets means that making new areas auditable is very much the art of the possible thereby placing significant new demands on traditional auditors. For example, Radcliffe (1999) illustrates how traditional auditors had to reinvent themselves in order to make efficiency auditing possible. We did not observe such auditor reinvention in the attempts to construct materiality in sustainability assurance. The non-accountant assurors' efforts and the respect that they were afforded by accountants rendered such a reinvention unnecessary given the social cohesion that existed between the accountants and non-accountants when addressing materiality. Traditional audit competencies were also mobilised as much as possible in the materiality determination process. However, the increasing number of traditional auditors specialising in sustainability assurance in JEL does suggest that there may be some financial auditors who willingly wish to reinvent themselves in order to specialise in providing assurance on sustainability reports.

Third, Power (2003) contends that much of the work examining the social construction of auditors' inference exudes a "deep scepticism about the merits of structured audit approaches" (p.390), with a constant tension between structure and judgement prevailing. The trend towards greater structure in approaches to audit is linked to motives surrounding legitimacy and control which do not necessarily lead to better or more efficient auditing. There is little doubt that the non-accountant assurors found that leaning on the notion of thresholds embedded in the traditional financial audit methodology allowed them to legitimate their decision making on materiality. However, while Power (2003) implies that the structured approach impedes judgement, our interviewees continually acknowledged the importance of judgement in addressing materiality *in the presence of* an overarching sustainability assurance methodology. They frequently used the structure offered by the methodology as a way of reassuring themselves that they had some legitimate rationale to support their judgements, but this did not restrict their exercise of judgement in and of itself.

Hence, the interviewees did not feel that the process of making judgements on materiality was 'corrupted'. While judgements were loosely guided by the methodology, the debates and discussion that occurred around thresholds offer a more nuanced picture of the structure-judgment relationship in the materiality construction process than Power (2003) proposes. In fact, despite the non-accountant assurors' recognition of the fluid, socially constructed nature of materiality, the uncertainty invoked by the materiality determination process actually led them to crave the apparent 'certainty' structured audit methodologies and concepts gave them, even if they did not fully comprehend their logic. Overall, consistent with Humphrey and Moizer's (1990) observations, the methodologies offered a loose framework for the exercise of judgement on materiality. A synergistic relationship between judgement and structure prevailed whereby threshold levels were seen as 'acts of faith' existing within the structure offered by the loose audit methodology (see, Humphrey and Moizer 1990). Hence, our evidence suggests that in processes where uncertainty and ambiguity exist, structure is welcome as it can act to support judgement.

Fourth, using the example of efforts to make brands auditable Power (2003, 1996) argues that the reliance on other experts is a dominant auditability strategy. He contends, however, that this reliance depends more on substantiating the credibility of the specialists' expertise as opposed to relying on the detail of what they actually do. Establishing trust in the competence and objectivity of *the specialist*, rather than in what they do, is therefore deemed the most important element of the auditability process. In our case, the knowledge and expertise of the non-accountant assurors became important in its own right, not just their apparent credibility as specialists, and they were afforded a certain level of agency. Their expertise was not considered 'alien' (p. 307) and they became a much more integral part of the entire audit process than Power's (1996) theorisation implies. This finding also contradicts Andon et al.'s (2015) contention that in order for non-accountant assurors to thrive in Big 4 environments, they need to reinvent themselves and fully embody the 'rules of the game' valued in the Big 4. Our analysis indicates that the extent of this reinvention was limited and therefore not overly problematic for non-accountant assurors. We found little evidence to suggest that these assurors felt extreme pressure to conform and to reinvent themselves when conducting materiality assessments, especially as they were afforded a level of respect by accountant assurors that was largely absent in O'Dwyer's (2011) study. In fact, the accountant assurors seemed keen to absorb the knowledge of non-accountant assurors and to embrace its relevance (see, Power 1997a). Therefore, in non-traditional assurance arenas,

such as sustainability assurance, what non-accountant experts actually do is considered as important as their objectivity, and to be accepted and to succeed in a Big 4 environment may not necessarily require these experts to behave in a conciliatory manner.

6. Conclusions

Our study advances our understanding of practitioners' efforts to apply a working definition and frame to the notion of materiality in new audit spaces. This responds to Cohen and Simnett's (2015) request for more research into how materiality is determined for corporate social responsibility (CSR) report assurance engagements and to Andon et al.'s (2015) call for more in-depth examinations of how concepts such as materiality translate to new audit spaces.

Our case study analysis develops and extends Power's (1995, 1996, 1997a, 1997b, 2003) theorisation of how new areas are made auditable. The process of auditability in sustainability assurance through the medium of materiality assessment can be typified by a number of interrelated concepts and processes. First, assuror flexibility is required when seeking technologies capable of addressing non-financial data. Flexibility is underpinned by non-accountant assuror intuition which allows them to cope with inherent ambiguity in the non-financial assurance domain. Second, this intuition is retrospectively rationalised by non-accountant assurors who adhere to the perceived authority of structured financial audit methodologies (and/or emergent non-financial assurance methodologies). These structures support judgements in the presence of extensive ambiguity and facilitate the tentative translation of financial audit knowledge to the non-financial assurance domain. Third, collaborative, holistic decision making processes gradually evolve and are characterised by the mobilisation of alliances of (accountant and non-accountant) 'expert' assurors seeking synergies in order to unite the unique aspects of their formal and tacit knowledge bases. These alliances seek social cohesion which assists in engendering a social consensus around the approaches both types of assurors adopt to determining and assessing materiality.

Overall, the paper increases our understanding of the more practical aspects of discretionary assurance services, in particular the nature of the interactions between non-accountant and accountant assurors. As noted above, we unveil a high level of synergy between accountant and non-accountant assurors thereby offering a counterpoint to previous studies which showed subject experts like non-accountants being suppressed and their skill-set marginalised in sustainability assurance processes (O'Dwyer 2011, O'Dwyer et al. 2011)

Non-accountant assurors gained confidence in their intuitive judgements on materiality partly through loosely attaching them to the financial audit methodologies. The social control mechanisms in JEL and the social cohesion within multidisciplinary audit teams helped create a social consensus around the operationalisation of materiality thereby offering reassurance to non-accountant assurors in particular (see: Pentland 1993). In this way, our evidence encourages practitioners in multidisciplinary audit teams to embrace rather than feel threatened by their individual differences in expertise. The synergies created in such a collaborative environment may actually lead to improved decision making.

Edgley et al. (2015) suggest that there is an urgent need for consistent guidance about materiality in sustainability assurance. Perhaps there is a need for principles-based guidance or for guidance more generally for the non-accounting firms in their study. However, we are not convinced that prescriptive guidance is likely to significantly evolve current practice in sustainability assurance, especially in accounting firms. We are reminded of Pentland's (1993) warning against excessive prescription given that "for any given rule, one must decide when to apply it, which requires more rules, each of which requires even more rules" (p.619). While we cannot generalise from a specific case, the findings of our study combined with the prior work of O'Dwyer (2011) and Edgley et al. (2015) suggest that practitioners will continue to rely significantly on intuition and professional judgement when addressing materiality issues in sustainability assurance. This is consistent with MacLullich's (2003) contention that in a new audit regime where auditors are expected to carry out a more qualitative assessment, the assurance process benefits from "more idiosyncratic unstructured judgements" (p.809). Hence, the social context that assurors operate in (see: Carpenter et al. 1994), encompassing factors such as social cohesion and social controls (see: Pentland 1993), will likely remain central to the operationalisation of materiality regardless of attempts to offer greater codification. Our analysis suggests that new more prescriptive guidance may be used retrospectively as a crutch aimed at offering reassurance to assurors in what is, and will likely remain, an inherently judgmental process underpinned by significant uncertainty. Moreover, given that a significant proportion of assurance engagements still offer limited assurance opinions (KPMG 2015), the extent to which more prescriptive guidance may have an influence on practice in the field is debatable**.**

The timing and context of our study is potentially important. For example, some of our findings contradict aspects of O'Dwyer's (2011) earlier analysis of the emergence of sustainability assurance in Big 4 firms, which supported several of Power's original

observations. Moreover, many of Power's observations, on environmental audit in particular, were made in a 1980s and 1990s context in which non-financial audit practices evolved in an entirely different manner to how sustainability assurance has advanced. Hence, future work could seek to further develop the ideas presented in this paper (and in Power's original ideas) in new and unique non-financial audit contexts (see: Andon et al., 2015; Jeacle, 2017). Future researchers should also remain open, as we have done, to the possibility that preconceived views, assumptions, concepts, and framings can be questioned using in-depth case-based evidence. This will allow researchers to *revise, extend or contest* widely accepted concepts and ideas and avoid the tendency to only report on case-based evidence that illuminates or 'confirms' the operation of 'pre-eminent' theoretical concepts (see: Flyvbjerg, 2006, pp. 234-237).

Our study opens up the possibility for some future promising research directions. First, prior research in sustainability assurance (including this study) has tended to focus on highlighting and examining differences between so-called 'accountant' and 'non-accountant' assurors. There is a need for a greater focus on the synergies between these groups as sustainability assurance evolves. Moreover, prior work has also focused predominantly on how non-accountants are 'coping' in Big 4 environments when confronted with the norms of financial audit and materiality assessments in these firms. However, financial auditors also choose to switch from financial audit in order to specialise in non-financial audit domains. Explicitly examining their intrinsic motivations for switching, their experiences, and, in particular, the influence they seek to bring to bear on assurance practices in new spaces, including materiality assessments, would be a fruitful avenue for future research.

Second, while this study has alluded to the socialisation of non-accountants in Big 4 environments, this was not its primary focus. Socialisation processes seek to simultaneously inculcate a specific way of thinking and performing in new audit spaces (Andon et al. 2015) and this can significantly influence approaches to practice and the operationalisation of key assurance concepts. For example, the necessity for 'Chinese walls' deemed essential for financial audit to enhance credibility was underplayed in the provision of sustainability assurance. A deeper understanding of these socialisation processes would further contribute to our understanding of how practice in sustainability assurance and other non-financial audit domains has evolved particularly given the social control aspects of financial audit practices.

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Appendix 1: JEL interviewee details

Interviewee	Position in JEL Sustainability Department	Background	Date of interview	Interview duration (minutes)
A1	Sr Manager	Accountant	22-03-13	128
NA1	Manager	CSR	05-04-13	60
A2	Senior	Accountant	19-04-13	81
A3	Resigned Partner	Accountant	22-04-13	102
NA2	Junior	Advisory	28-05-13	82
A4	Junior	Accountant	05-06-13	78
NA3	Sr Manager	Technical/advisory	13-06-13	70
A5	Manager	Accountant	14-06-13	86
A5 **	Manager	Accountant	18-06-13	60
NA4	Junior	Advisory	27-06-13	53
NA5	Senior	CSR management specialist	01-07-13	25
A6	Manager	Accountant	03-07-13	54
NA6	Senior	Advisory	03-07-13	52
A7	Partner	Accountant	04-07-13	43

Notes:

Interviewee codes commencing with A refer to 'accountant assurors' and are defined as qualified financial auditors who sometimes undertake sustainability assurance engagements. Interview codes starting with NA refer to 'non-accountant assurors' and are defined as CSR practitioners with limited or no financial auditing experience.

** Interviewee A5 was interviewed twice.

Endnotes:

[1] It is pertinent to point out that the evidence gathered in prior studies examining the operationalisation of materiality in sustainability assurance is somewhat dated. Edgley et al. (2015) finished their interview data collection in 2007 while O'Dwyer (2011) and O'Dwyer et al. (2011) collected data from 2005 to 2010. However, most of O'Dwyer's (2011) and O'Dwyer et al.'s (2011) data was gathered in 2006. Our data was collected in 2013 in a more evolved Big 4 sustainability assurance context.

[2] We acknowledge however, that this gives a segmented view about collaboration on materiality judgments between these two groups in an accounting firm setting and may not necessarily be reflective of how these two groups interact in a non-accounting firm setting.

[3] The UK Financial Reporting Council (FRC) issued ISA (UK and Ireland) 700 (Revised) in 2013 which requires financial auditors to expand their audit reports to include: an explanation of planning and materiality levels used in the audit; an overview of the scope of the audit; an explanation of how the auditor addressed key audit risks; and how materiality influenced the scope of the audit.

[4] Three organisations have issued initiatives in relation to how materiality should be specifically defined and reported for sustainability disclosures: the International Integrated Reporting Council (IIRC); the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI). They all diverge in their approaches based on which stakeholder group they focus their initiative on. For SASB and IIRC, the level of materiality ascribed to an issue is entirely contingent on how much it influences decisions and assessments made by the providers of financial capital. In contrast, for the GRI the opinions of stakeholders have value in their own right, regardless of investors' perceived needs.

[5] Both of the partners interviewed were heavily active in the sustainability assurance field. While one of these partners had early training in financial audit, he had spent all of his/her career as a partner building the sustainability-related aspects of the services in the firm.

[6] The interviews were undertaken by a postgraduate research student who was conducting an internship in JEL. She was trained and closely supervised by two of the authors throughout the data gathering process. These authors also jointly developed the questions used in the interviews. All except of one of the interviews was conducted through the Dutch language, the mother tongue of the interviewees. These interviews were first transcribed into Dutch and sent to the interviewees for comment. To facilitate analysis by all three authors of this paper, these transcripts were later professionally translated word-for-word into English and checked by the Dutch speaking author to ensure that nothing was lost in translation. The analysis reported in this paper is therefore fully based on an analysis of these full English-language interview transcripts.

[7] The interviewee codes A1 to A7 refer to interviewees who qualified financial auditors and who sometimes undertake sustainable assurance engagements (accountant assurors). NA1 to NA6 refer to interviewees who CSR practitioners with limited or no financial auditing experience (non-accountants). For more details on the interviewees, please see Appendix 1.

[8] While interviewee A2 speaks of determining material topics, it is very much in the sense that he is looking at the sustainability report that the client's management has already developed. Using his knowledge of the auditee derived from past and current experience, the assurors check that there is no significant omission of a material topic, and that all topics disclosed are not materially misstated.