Due-diligence of private equity funds: A practice based view

Abstract: This paper contributes to the 'social studies of finance' and accounting literatures by investigating the investment evaluation practices prevalent in the private equity (PE) industry. Drawing on the case material related to the due-diligence of PE funds at a leading PE asset management firm and combining it with insights from Schatzki's 'site' ontology and social studies of finance literature, the paper theorizes the due-diligence of PE funds as a calculative practice not always necessarily involving numbers. The paper also identifies and differentiates the 'causal' and 'prefigurational' relations between practices and material entities forming part of the 'site'.

Key words: Private Equity, Investment evaluation, Due-diligence, Site ontology, Social studies of finance

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1. Introduction:

Recently, MacKenzie, Hardie, Clunie, Preda, and Pardo-Guerra (2012) posed the following question: How do the professional participants in financial markets evaluate investment opportunities? MacKenzie et al. argue that the investment evaluation practices are crucial to the operation of financial markets as they help determine the investment opportunities to which investment capital does and does not flow. Unfortunately, we know surprisingly little about such investment evaluation practices (MacKenzie, 2011; MacKenzie et al., 2012).

Private equity (PE) as an industry has over the years become a significant component of the global financial markets. The PE industry has exploded in scale and scope in recent years with approximately over USD 3 trillion in global assets[1]. An important group of professional investors in the PE industry is the asset management firms which offer and manage PE fund of funds products. In 2011, the top 25 PE Fund of funds had approximately USD 249 billion of pension money under management[2]. Hence it is important for us to know how these PE asset managers deploy our pension money. How do they evaluate and select the best PE funds to invest our pension money? This paper takes a first step towards shedding light on the investment decision making of PE asset managers.

Studying and understanding the investment evaluation and decision making practices of PE asset managers is also important for pragmatic reasons. Such pragmatic issues include questions of capital allocation and issues around the efficiency of this part of the finance industry. Once an investor commits to invest in a PE fund, the PE firms have complete discretion over the subsequent investing of these funds in whatever opportunities the investment professionals of the PE firm deem appropriate. Moreover, an investor is unable to exit from a PE fund until it is completely liquidated (normally a period of 10-12 years), except under extremely unusual circumstances or unless the investor elects to dispose its position in a secondary sale (Steers, 2010). She also notes that investors face other problems in assessing their commitment as there is little or no publicly available data to assist in PE

[1] The New York Times 11/10/2012. The industry had USD 2.5 trillion of assets under management at the end of 2009 (Maslakovic, 2010)

[2] Rankings based on the amount of pension money managed [Source: Financial Times 03/07/2012]

fund manager selection. As Steers (ibid, p 4) explains, “there are no rating agencies to help, no standard documentation and no comprehensive published measures of individual funds’ performance. There are also no ‘investable’ private equity indices, so an investor cannot track a ‘standard’ portfolio of managers”. Given this context there are concerns as to how investors can be assured or assure themselves that their funds are being committed to a good manager who will be motivated to make effective and profitable commitments of invested funds.

“The sense of an economic investment is not pre-given, but has to be found out and decided, step by step and moment by moment” (Kalthoff 2005, p 71). In this paper we report our research on the investment evaluation practices at Directors Group (DG), a leading PE asset management firm. We particularly focus on the due-diligence practice at DG which is an important practice in deciding which PE funds to invest in. By understanding the investment evaluation practices, this paper aims to contribute to the exciting new specialism of ‘social studies of finance’[and accounting] (MacKenzie et al., 2012; Vollmer, Mennicken, & Preda, 2009). This paper also directly addresses Van der Stede’s (2011) call for more accounting research on financial services firms.

Buenza and Stark (2005, p 99) argue that “problems of valuation and calculation” should be put at the core of the sociology of finance research agenda along with an emphasis on the analysis of the “actual calculative practices of actors at work”. On a similar note, Kalthoff (2007, p 156) argues that “a characteristic feature of modern societies is the calculation of vast number of social phenomena”. Until recently sociology has continued to neglect the role and importance of economic calculation; “even in recent studies in economic sociology calculation is scarcely taken into further consideration” (ibid).

Most literature on calculative practices treats calculation as some form of technical operation/analysis involving numbers (Callon & Law, 2005). However, drawing on Heidegger (1954), Kalthoff (2005, p 73) argues that “calculation is not limited to operations with numbers: computing in a broader more essential sense means … to take into consideration, to count on something. It also means to form a judgement with something upon something – activities in which images, categories and distinctions are involved”. In this paper, we explain the due-diligence of PE funds as a calculative practice, not always necessarily involving numerical analysis (Callon & Law, 2005; Callon & Muniesa, 2005; Kalthoff, 2005; Lave, 1988).

Svetlova (2009) argues for the application of practice theories in order to explain the practices of and within financial markets and financial services firms. Chua and Mahama (2012, p 81) argue that "adopting [a] practice-focused approach to research provides opportunities for the researcher to learn from these theories-in-practice and hence contribute to management accounting thought and literature". Practice approaches respond well to the realities reported back from the field, they open us to insights from across all the organizational disciplines and they also offer rich theoretical and methodological resources (Whittington, 2011, p 184). In this paper, we apply Schatzki's (1996, 2002, 2010b) practice-theoretical perspectives of social life to develop an understanding of investment evaluation practices at our case company. Schatzki is one of the key contemporary contributors to practice theory. In management accounting research Ahrens and Chapman (2007) and Jørgensen and Messner (2010) have adopted Schatzki's site ontology to understand and theorize the role of management accounting and control systems. Jørgensen and Messner (ibid) argue that this theoretical approach is appreciative of the complexity of practices. Our aim is to provide a theoretically informed understanding of the behaviour of a critical part of the financial markets – namely the PE industry. This paper is organized as follows. The next section introduces the key concepts of Schatzki's site ontology that are used to explain our case. Section 3 explains in brief how the PE industry is organized and also introduces DG, our case firm. Section 4 presents the research design. Section 5 elaborates on the due-diligence practices of Directors Group and section 6 draws on section 5 to demonstrate the relations between 'practices' and 'material entities'. In section 7 we explore and explain the investment management meetings at DG. Section 8 builds on the case material and the theoretical insights to discuss the findings of our case and finally section 9 outline the conclusions.

2. Schatzki's site ontology

According to Schatzki (2005, p 471), "the site of the social is composed of nexuses of practices and material arrangements". He explains material arrangement as set-ups of entities (human beings, artefacts, other organisms, and things) and practices as "organized, open-ended spatial-temporal" nexus of human activities (bodily doings and sayings) examples of which are educational practices, management practices, shop-floor practices, etc. He explains that human coexistence "transpires as and amid an elaborate, constantly evolving nexus of arranged things and organized activities" (Schatzki, 2002, p XI; cf. Latour 1987, Knorr Cetina 1997). Hence, Schatzki's ontology clearly acknowledges compositional significance to materiality in social life.

As explained by Schatzki (2002, 2010b), a set of actions that compose a practice are organized by and linked through (1) practical understandings, (2) rules, (3) teleoaffective structure, and (4) general understandings. Together, these four dimensions, as Schatzki labels them provide a framework of practice organization. Please refer Nama and Lowe (2013) for a brief review of the above mentioned terminology and concepts.

Schatzki has always acknowledged the importance of materiality. "Practices are carried on amid and determinative of, while also dependent on and altered by, material arrangements" (Schatzki, 2010a, p 130). He argues that "materiality is not interwoven with social life, but stronger, a dimension of it. Society is not just inevitably and ubiquitously linked to materiality and nature: the latter is a dimension of the former" (ibid, p 141). Because practices are defined as bodily doings and sayings, and humans are classified as part of the material arrangements, practices are by default material. There is no practice which is not material. So following his ontology, "any thing, property, or event can be at once both social and material-natural" (ibid, p 133).

Unlike interactionist accounts of social life (for e.g., Dickens, 1992; Rappaport, 1971), Schatzki emphasizes the constitutive role of materiality to social life and "declines to talk of interactions, exchanges, or dialectical relationship between society and nature" (op. cit., p 134). However, he states that 'practices' and 'arrangements' form bundles through at least four sorts of relation: causality, prefiguration, constitution, and intelligibility (op. cit., p 139).

<u>Causality:</u> Schatzki (op. cit., p 139) argues that there are different forms of causal relations between practices and material arrangements: (1) Human activities and practices intervene in the world and alter, create or rearrange non-human material entities; (2) Non-human material entities also exert causal effects: Whenever people react to material properties of entities (or to events that befall material entities), the entities (or events) cause their actions; and (3) Non-human material entities also maintain causal relations among themselves.

<u>Prefiguration:</u> "Prefiguration is the social present shaping/influencing/affecting the social future, above all, the nascent social future" (Schatzki, 2010a, p 140). While it is very common to conceptualize prefiguration through the notion of fields of possibility (for e.g., Giddens, 1984), Schatzki (op. cit., p 140) argues "that to analyze prefiguration as the

delimitation of possibility is to reduce its bearing on the actual course of practice to a minimum". He suggests that "prefiguration is better understood as a qualification of possible paths of action on such registers as easy and hard, obvious and obscure, tiresome and invigorating, short and long, and so on" (op. cit., p 140). He argues that material arrangements clearly prefigure practices in such varied and indefinitely complex ways.

<u>Constitution:</u> Material entities constitute practices in two ways: (1) by being essential to them; (2) by being pervasively involved in particular practices at particular times and places. Schatzki argues that almost all practices would not exist or would not take the current forms were it not for the particular material entities present therein. Also, most non-human material entities "through which human practices proceed would not exist or would assume different shapes were it not for the particular practices that are responsible for them and/or carried on amid them". Practices and material entities/arrangements are co-constitutive (op. cit., p 140).

<u>Intelligibility:</u> According to Schatzki (1996, p 111), intelligibility means making sense. Schatzki argues that the non-human material entities that make up arrangements amid which humans proceed are intelligible to the humans and this intelligibility is 'instituted' in the practices they carry on (Schatzki, 2010a, p 141). According to this thesis, the meaning of the non-human material entities is tied to the human practices of which they are part of.

3. Introduction to the private equity industry and the case organization

This section of the paper consists of two parts. The first part briefly discusses the organization of the PE industry and the second part introduces the case organization whose practices we report in this research.

3.1. Organization of the private equity industry

PE funds are usually formed as limited partnerships, with the PE firm being the general partner of such limited partnership. Hence, the investors in PE funds are often referred to as 'Limited Partners' (also known as LPs), and the PE firms themselves as 'General Partners' (also known as GPs). GPs' carry unlimited liability for the liabilities of the fund whereas LPs' limit their total liability to the amount of equity capital that they commit to invest.

The LPs' can either be individuals or institutional investors and they vary significantly in terms of their knowledge of PE. Example of individual investors would be high net-worth individuals and examples of institutional investors include pension funds, sovereign wealth funds, insurance companies, PE asset management companies, etc. Most sophisticated of all these are the PE asset managers who run the fund of (PE) funds (Fraser-Samspon, 2010).

Fund of (PE) funds are PE investment programs offered by specialist asset management companies. These investment programs almost exclusively invest in PE funds. Directors Group (our case company) is one such large global PE asset management firm that offers several investment products, which invest exclusively in PE funds.

3.2. Case organization

"A setting is a named context in which phenomena occur that might be studied from any number of angles" (Hammersley & Atkinson, 2007, p 32). The setting for our research is 'Directors Group'[3], a large global PE asset management firm. The company was formed in late 1990s' and is still privately held. The firm's global presence involved, in 2011, a staff of more than 100 people working in more than 5 offices in the North and South Americas, Europe and Asia[4]. The firm has grown very rapidly in the last 5 to 6 years by establishing new offices and investment teams in emerging markets and also in the Western Europe and North America. The firm has a significant global presence as evidenced by its asset/investment holdings and exposure across many countries.

The different businesses within the firm include: Primaries; Secondaries; Co-investments; Real estate; and Clean energy and infrastructure. The Primaries fund of funds business offers various investment products for its clients which invest in new issues of PE funds (Fraser-Samspon, 2010). Each product has a particular focus, strategy and size and investments are made according to the respective product strategies. A few examples of the product offerings in this business are as follows: European Mid Market fund, Global Venture fund, Emerging Markets fund, etc. Also the firm has successors for each of its products. For example, there are European Mid Market fund I, European Mid Market fund II, European Mid Market fund III, etc which have been raised at different points in time (in succeeding years). The strategy of the secondaries business is to offer investment products whose main objective is to buy a limited partners position in private equity funds (Gilligan & Wright, 2010). Please refer appendix 5 for an illustration of DG's primaries and secondaries products. The Co-investment business offers investment products which invest in individual

[3] Names of the people and the company have been disguised.
[4] The exact number of employees and offices are not specified in order to ensure anonymity.

portfolio companies alongside other PE funds (Beaton & Smith, 2011). The Real estate and Clean energy and infrastructure businesses offer products that invest in projects of their respective domain interests. The firm has successfully raised at least 5 successor funds for its legacy products. The clients of DG include well known pension funds, multinational insurance companies, other institutional investors, and high net worth individuals.

DG is ISO 9001:2008 certified and is also a signatory of the United Nations Principles for Responsible Investment. The firm's competitive position is assisted by the strong team of senior investment professionals having over 20 years of investing and due-diligence expertise. DG oversees over USD 20 billion of client committed capital. The firm has won awards in the recent years such as the best fund of funds for the year by 'Private Equity International'.

4. Research design

For this research, we combine Schatzki's site ontology with subjective epistemology (interviewer / knower and respondent co-create understandings), and naturalistic methods (Denzin & Lincoln, 2008).

Data collection: According to Schatzki (2005), a pivotal task in understanding an organization is to identify the actions that compose it. The next important task is to identify the practice-arrangement bundles of which the identified actions are a part. Also contained in this second task is discovering the extent to which the bundles cohere or compete. The third important task in studying an organization is identifying other nets of practice arrangement bundles to which the net composing the organization is closely tied. "To grasp the ties among these nets is to study, among other things, commonalities and orchestrations in their actions, teleological orders, and rules; chains of action, including harmonious, competitive, and conflictual interactions; material connections among nets; and the desires, beliefs, and other attitudes that participants in one net have toward the other nets" (Schatzki, 2005, p 476). In order to ensure theoretical consistency and ensure an elegant research design, we followed the suggestions by Schatzki to study organizations and gather empirical materials.

It is important to note that the research access to PE funds like any other alternative investment asset management firms is hard. The difficulty of research access into alternative investment management firms has been acknowledged by eminent scholars such as Hardie and MacKenzie (2007; see also King, 2008). The PE sector is a discrete one, partly through legal necessity (the non-solicitation requirement) and partly through choice.

To gain in-depth insights on the activities and practices, several interviews were conducted with people at various levels in DG[5] (from associate and analyst levels to the managing directors). The interviews were recorded digitally and subsequently transcribed. A list of interviews conducted with anonymized details of the interviewees is provided in appendix 1. During our data collection period, we became aware of an Associate who was promoted to Vice President. We also analyzed internal documents such as information memorandums, fund profiles, fund rating documents, etc. Moreover, the first author observed an Associate and a Vice President for a couple of half day sessions while they were working on the fund rating and due-diligence practices. Fund rating is done by the analysts/associates once a week and they spend approximately 3 hours per week on this activity. The due-diligence of a fund is a much longer process which takes up to 4 months per investment opportunity. The analysts and associates spend approximately 50% of their working week on due-diligence.

While the theory influenced / guided the data collection, we were as open as possible in the interviews so that we did not miss unanticipated but potentially important aspects (Walsham, 1995, 2006). The data collection was influenced by theory only to the extent that the focus on practices and activities could be maintained. Hence, we can say that the theory is guided the data collection only partially.

<u>Data analysis:</u> The empirical material gathered was simultaneously being analyzed using concepts drawn from Schatzki's (2002) site ontology (thereby creating a data-theory link). In qualitative research, "no analysis strategy will produce theory without an uncodifiable creative leap, however small" (Langley, 1999, p 691). We used two techniques to ground this leap in the data. First, the second author became a devil's advocate who asked critical questions and introduced alternative explanations of the data to improve the quality of the theorizing. The second author identified patterns in the data that the first author either supported or refuted by his rich understanding of the data.

[5] Please refer appendix 2 for the organizational hierarchy in the investment management team at DG.

5. Primaries Vs Secondaries due-diligence

In the PE setting, investment evaluation can be said to refer to "*how* market participants arrive at their judgement of the value (desirability) of the good[6] offered in the market" (Aspers & Beckert, 2011, p 14). The investment evaluation practices at DG are extensive, elaborate, and include several stages (please refer appendix 3). The various investment evaluation practices include: rating practice, the due-diligence practice, investment management meetings, and investment committee meetings. In this paper, we mainly focus on the due-diligence practice but we also briefly examine aspects of the investment management meetings in Section 7.

5.1. Primaries due-diligence

Due-diligence is a long and complex process which involves detailed evaluation/appraisal of the investment proposals under consideration. As Jane stated:

> Full due-diligence means normally 2 or 3 months of assessment and review – Jane (Director/5)

The due-diligence of investment proposals at DG is a team based practice. For each due-diligence at DG, a team comprising of two or three investment professionals is formed. Depending upon the complexity of the due-diligence and the timing, the team may be formed of either, one senior and one junior member of the investment team, or two seniors and a junior, or one senior and two juniors. The due-diligence responsibilities are allocated by the managing directors of the respective regions (Americas, Europe, and Asia) to their team members. The managing director takes into account the specialization of the team members in terms of strategy (E.g., venture, buyout, growth, etc) and/or geography, their workload and the closing date of the PE funds.

According to Schatzki (2002, p 80; see also Schatzki 1996, 2010), "a practice always exhibits a set of ends that participants should or may pursue" which he refers to as 'teleology'. The 'teleology' of the due-diligence practice is to determine the quality of the investment proposal [PE fund] under consideration based on a detailed evaluation/appraisal. Jane explained:

[6] Although economists usually distinguish between goods and financial assets/investments, Aspers and Beckert subsume financial assets/investments under the notion of goods (ibid, p 4: footnote 1).

> I mean really a due-diligence is to check if it's [investment proposal] of investable quality – Jane (Director/5)

The investment professionals at DG conducting the due-diligence of a proposed opportunity [PE fund] conduct a detailed evaluation/appraisal of the PE fund taking into consideration several aspects/issues of the PE fund and form a view about the its quality. At this point, two very important questions arise:

(1) What is under evaluation/appraisal?
(2) How is the quality of the investment opportunity determined?

PE funds are established as "blind pools" of capital (Talmor & Vasvari, 2011). At the time of initial fund rising when the GPs seek investment commitments from LPs for their fund, the fund would not be holding any "real" assets. Hence the phrase 'blind pools'. There are details that can be provided about the aim and likely size of the proposed investment pool – but there are no underlying investments at this stage … and so there are no businesses or financial assets that can be formally evaluated.

The GPs advertise the objective of the fund, its strategy, details of the experience and qualifications of its investment professionals and other essential information about the proposed new fund and the LPs decide whether they wish to commit to invest in the fund or not. So how do LPs make investment decisions, about committing to invest in a *new* fund by a GP, and what aspects are taken into consideration for evaluating and/or determining the quality of such investment opportunities? These are very interesting questions to ask because unlike many other investment opportunities that are "real" assets in themselves or which represent underlying "real" assets in the form of securities [e.g., secured debt instruments, common stocks, real estate investments, etc], the opportunity to invest in a new PE fund [primary investment] does not represent any underlying "real" assets at the time the investment decision is made. The 'blind pool' represents an investment programme which will gradually be invested in "real" assets over the first 5 to 6 years of the fund's existence.

The following quote by Jane illustrates the key aspects of due-diligence for DG's Primaries business:

> … [there are] 3 main areas really. We are looking at the management team [of the PE fund under consideration] and there we are looking at each individual [investment professional], we look at their CVs, whether they

> came from a financial background or maybe they worked in [PE] industry themselves, may be they come from an entrepreneurial background. So we look at their experience, we look at how long they have been with the management team, how stable and how cohesive the management team are, we look at the economics of the management team as well, so you know not just salaries and bonuses, but the carried interest which is incentive fee, whether that is equally shared amongst the team, whether the right people are getting the right share of the carry. So we look at all the economics and the incentives of the team, stability of the team, we look at the people who have left, so if it is a team where the people have come in and stayed for a couple of years and then gone, we will try and analyze that ... We also look at the previous funds and the performance of those and we drill down the individual companies, so we look at the role that the [investment professionals of the] GP had in the companies, whether they were majority ownership, how they added value, did they make acquisitions, did they change management teams, did they increase the [number of] customers, exactly what they have done to build value … And then we also look at the terms and conditions of the funds as well, you know how are we tied in, what powers the investors have. Those are the sort of 3 main areas but really they all overlap. And we like to do detailed reference calls, obviously the managers are going to tell us what we like to hear but then what we try and do is get both references which they have given to us and then our own references – Jane (Director/5)

Each of the issues[7] referred by Jane is important for various reasons. Since in the primaries business the time between commitment to invest in a PE fund and getting the investment proceeds back from the fund is about 10 – 12 years, it is extremely important for DG that there are no (potential) problems in the management and investment teams of the PE funds it is going to invest in. This is the reason why DG evaluates the salaries, bonuses, and arrangement to share the carried interest of both the members of the management and investment teams of the PE fund under consideration. With its vast experience in investing in PE funds, the due-diligence teams at DG evaluate if the various members of the management and investments teams of the PE fund under consideration are getting a 'fair' share of the

[7] The due-diligence team embarks on a formal due-diligence process with the help of an IM template. The IM template has several headings which highlight the various aspects/issues which need to be considered during primaries due-diligence. Please see section 4.3 for details on the template.

carried interest alongside their salaries and bonuses. This is to ensure that this aspect does not become a potential source of conflicts among the members of the management and investment teams during DGs' investment tenure.

In the following we will look at some vignettes based on recent due-diligences undertaken by DG in order to explain how the key issues mentioned earlier by Jane matter within DG. In the first vignette, Tom, one of the VPs', explains a recent due-diligence process he was involved in. This particular due-diligence was to evaluate a forthcoming European mid-market fund by a GP which was so far specialized and focussed in European mid-market transactions. As Tom explained:

> …this particular [PE] manager, they have (sic) [started] other fund activities. For example they have started raising an infrastructure fund, a mezzanine fund, Asia pacific fund ... Our concern there would be that the [PE] manager … used to be purely focussed on European large buyouts, our concern here is now they might create new teams to pursue these strategies but this [could be a] … distraction to the team which is [currently in place]. They used to be purely focussed on European buyout and we would be concerned if they start doing lots of other things, we would definitely be concerned if it's (sic) the same team members [taking on all these new responsibilities] – Tom (VP/6)

So, the strategy of the PE fund and the constitution, expertise and responsibilities of the GPs' investment team are not separate issues. They are very closely related within the evaluation and assessment of the PE fund. Also, we see that DG while assessing one particular fund of a GP also takes into consideration what the GP is doing in terms of other funds and how many funds the often limited number of senior investment professionals are involved at the same time. Such constraints compromise the amount of time and quality of expertise the GP's investment professionals can bring into each fund they are involved in.

Tom continued to explain the importance of the key terms of the partnership agreement. He stated:

> …if we invested in a fund whose fund strategy is to invest predominantly in Europe, it's a European buyout manager that's their strategy but then suddenly they start making investments in Japan and Australia then we would be concerned. So that would also be an issue. I mean it depends on most

> fund[s' offer] documents[8]. Some do have an allowance of say 10% to other geographies, some have 0 [%]. It just depends on how the fund documentation was structured in the first place – Tom (VP/6)

The following example provided by Jane in which she explains another recent due-diligence further reveals the importance of analyzing the composition of the GPs' investment team that would be managing the PE fund under consideration.

> We have just gone through a due-diligence ... Actually performance [of the prior funds run by this GP] looks quite good, it's a very stable team but we have concerns for instance in this particular case on succession. All the partners are in their 50s. Obviously we are looking at going into another 10 year partnership with them. So we like to think that they have looked at succession issues [with the investment team] and they have dealt with it ... In this case, they've said we haven't discussed it. We haven't discussed it internally … and we are not communicating anything to the outside world. Now that is really unusual to do … in private equity. So that was one concern – Jane (Director/5)

Another aspect which is taken into consideration [as mentioned at the start of the above quote from Jane] is the financial performance/track record of the previous funds managed by the particular members of the GPs' investment team which would be managing the PE fund under evaluation. Recently Talmor and Vasvari (2011) indicate that analyzing the performance track record is as an absolute imperative in the due-diligence process and presumably the most important due-diligence criterion. However, for DG it is just one of the criteria but not the most important one (c.f., Talmor and Vasvari, 2011). Jane explained two reasons for the same in the context of investing in to European venture capital funds: The first reason being the difficulty/impossibility of obtaining an adequate impression about the potential of the GP's investment team just by looking at the historical financial reports. Jane made the following point about venture capital funds:

> [The potential of] venture [capital funds] is very difficult to get across on paper you know you have to really meet with the group… sometimes on paper it doesn't look good – (Director/5)

[8] Private placement memorandum [PPM] is the industry term for the offer documents of PE funds

Hence, similar to financial analysts in the studies by Knorr Cetina and Wansleben (Knorr Cetina, 2010; Wansleben, 2012), investment professionals at DG performing due-diligence conduct 'proxy ethnographies' at the GP firm. This provides a look behind, or perhaps beyond, the figures and accounts they receive, fill the gaps left by disclosed information, and develop a feel of the PE firm and the fund under evaluation. In these instances a decision may depend much more on a feel for the consistency, expertise and skill set of the management team of the GP fund.

The second reason, she notes, relates to the recent and current macro economic circumstances. As Jane explained:

> …often you can't really look at [the financial] track record because we have been through such an awful period in the European venture [capital sector] that there hasn't been performance. So it really is looking at the potential of the portfolio [of the current fund being invested]. So you spend a lot of time talking to the managers [at the GP] about that … hmm … quality of the management … (do) they understand the technology, their networks … sometimes from meeting somebody you get a real feel for if this is really a high profile person, obviously we do reference calls as well to support all that … hmm … and again I can give an example of a group I was in recently. They were invested in a company that deal with a particular technology and we are aware of another company that has a competing technology … hmm … and I just sort of mentioned to them you know about this other company and they didn't seem to have heard of it and that to me you know… truly you must know the competitors in the market. So it's things like that you go just get a feel sometimes from talking to people that they are not quite as connected or switched on … hmm … you can't define, you often can't define what it is but through meeting people the way they [GP's investment professionals] gel together, their knowledge and everything … – (Director/5)

The above quote re-emphasizes the famous saying "past performance does not guarantee future results". Just because the past performance of most funds were poor [due to the macro economic circumstances] doesn't mean that they will continue to deliver poor performance into the future as well. So while DG analysts take into consideration the past performance, they look beyond and take into consideration other aspects as well. Other qualitative factors such as the network of the GPs' team, the level of expertise of the various members of the team in the targeted sectors of the PE fund under evaluation, etc are used in order to assess the quality and potential of the PE fund under consideration. Hence, the above two quotes reiterate:

(a) The impossibility of (financial) reports (for e.g., fund performance reports) to show some underlying economic "reality" (Kalthoff, 2005); and

(b) The importance of meeting with the GPs' investment team [which is responsible for the PE fund under evaluation] in order to get a feel about the quality, potential, and the expertise of the team, its professional and personal network and other relevant aspects. These meetings are very important in terms of the insights they generate and help the investment professionals conducting the due-diligence at DG to form a view about the PE fund under evaluation.

After analyzing/evaluating the fund under consideration [as discussed above] the analysts prepare a report. The due-diligence report prepared by the analysts reflects the view formed or developed by the analysts on the respective fund. Hence, the due-diligence reports [representation devices] "are by no means neutral devices; they do not just depict reality 'out there' but represent them in a specific way and offer a specific view upon" the PE fund (Kalthoff, 2005, p 168; see also: Kalthoff, 2002). As Kalthoff (2005, p 74; see also: Heidegger, 1977) explains "getting a picture of something (cognitive presentation) is equivalent to being in the picture, which in turn means to *produce* or to *build* something" [italics in original] . In this case, the investment professionals at DG conducting the due-diligence build or produce their view about the investment proposal in their report.

As we have indicated in the above discussion, there are several factors which shape the 'intelligibility' of the due-diligence team while conducting the due-diligence of Primaries opportunities. We have also seen that DG spends a lot of time in qualitative diligence. Many of the aspects which the due-diligence team takes into consideration cannot be expressed in numerical form and cannot be evaluated by quantitative analysis. The due-diligence team judges the PE fund and forms a view about it based mainly on several qualitative criteria. Hence, the 'calculation' (Kalthoff, 2005) here is mainly non-numerical.

5.2. Secondaries due-diligence

The secondaries business has some important differences when compared to that of the primaries. Whereas in the primaries business the investment professionals aim to get into/invest in a PE fund when the PE manager is fund raising, the secondaries business looks to acquire/purchase an existing LP's position in a PE fund which is either partly or fully invested. In other words, whereas the primary fund of funds make commitments to PE funds to finance future investments in a portfolio of companies that are typically not yet identified, secondary fund of funds buy an existing pool of assets (funded portion) alongside a legal obligation to contribute unfunded capital to the PE fund in the future (Kleymenova & Jinkens, 2011). Since secondaries business invests in PE funds when the PE funds are, at least, partly invested, the investment represents partial ownership in a "real" asset bundle [the underlying companies] through the PE fund. Rupert, one of the vice presidents suggested that we have to think of secondaries business a bit like used car sales or acquisitions. Talking about the business she heads at DG, Maria, the managing director of the secondaries team stated:

> Generally if you figure most private equity funds have a life of …between 13 and 15 years, may be a little shorter, we are generally investing … on average something between the 3rd and the 5th year of a fund's life. So that fund is probably at least 60% invested or much more fully invested than that and so we basically chop off a third of the time horizon – Maria (MD/9)

This shorter holding period and the different nature of the investments which characterize the secondaries business brings about considerable differences in regard to investment evaluation and due-diligence practices when compared to primaries. Since for Secondaries any investment will involve taking at least a partial position in "real" assets [portfolio companies] through the PE fund, there is much more scope for DG's due-diligence team to conduct financial and economic analysis of the underlying assets. Maria highlighted an important difference in the approach to secondaries due-diligence as against the due-diligence of primaries:

> … what we do in secondaries is considerably more analytical[9]. We run very detailed models and spreadsheets assessing the investments in a given portfolio that we are considering acquiring and as part of that we of course

[9] Read: Quantitative. This will become evident in the later part of the quote.

> have a price that we are targeting that we should pay and the discussion centres around whether it's an economically attractive transaction at that price and then we spend a fair amount of time forming our own opinion of what the value for each of the portfolio companies is as opposed to the values that the General partner might have signed ... So it's a far more I would say analytical as opposed to qualitative decision at some point because if the investment just doesn't have sufficient return you just don't do it whereas there could be situations given an investment in a fund which we would make as a primary investment where you might find a situation let's say the fund that preceeded the current fund was not very good and the current fund is very immature but you think it will be a good fund. [In such a situation] … you recommend a fund on a much more qualitative basis than on a quantitative basis … and still get a deal approved whereas with a poor mathematical outcome, in terms of rates of return, for a secondaries you just don't proceed – Maria (MD/9)

As mentioned by Maria, calculating/identifying an appropriate price at which to buy the proposed investment is an important outcome of the secondaries due-diligence and in order to determine the price, the due-diligence team focuses on the quality of the "real" assets [portfolio companies] and the future potential of the portfolio companies. As Rupert explained:

> Well we look at the assets, then we see for example let's say the fund has 80% called and 10 transactions in there – 2 are written off already, 1 is a high flying 6x opportunity, well that's nice but I don't get that much from that, so my main focus I am looking at is the uplift opportunities. So transactions that they just started, that are still listed or valued at cost or slightly above or slightly below, there if I see … the growth opportunity within those pieces that they can get a 2 or 2.5x from that 1x, that's my major uplift. I am looking for uplift. If it's already written up and if it will be sold in half a year and I buy in at a discount but still the piece is at 6x what's my upside? I can only get the downside that they sell it for 5x for example. So I look for uplift opportunities for the underlying companies – (VP/11)

Hence, analyzing the portfolio and evaluating each company in terms of the potential increase in its value forms an important part of the due-diligence of the secondaries opportunities. As also explained by Maria:

> We … go on to spend a fair amount of time … in the portfolio company analysis. We do our own valuation of each of the companies based on the cash flows and based on the market multiples sometimes discounted cash flows depending on the company and as a result you know we have a different form of analysis and it talks about expected outcomes on a base case, on a conservative case, and on a higher case and we usually weight those so that you know …we have a blended expected outcome – Maria (MD/9)

This analysis helps the team to determine the discount rate and in turn the price at which DG may want to purchase the proposed opportunity. As Kalthoff (2005, p 74) argues "The technical calculation of numbers is not the end of the story, but rather the starting point of the process of 'calculating with something', that is, expectation and interpretation". The portfolio company analysis helps the due-diligence team to determine if the investment opportunity is of interest for DG to buy [or not] and the price at which to buy [if at all]. The price is calculated by multiplying an appropriate discount rate to the book value of the investment opportunity under consideration.

Maria also explained that the due-diligence team does not base its pricing and investment decision only on the reports and valuations of the GP. In order to perform an informed valuation of the portfolio companies the people carrying out the due-diligence familiarize themselves with the companies by engaging in in-depth discussions with the investment manager at the GP who is directly responsible for a particular portfolio company.

> … if there is an issue of … specificity with a particular [portfolio] company we will talk to the actual person at the buyout shop who is in charge of an investment … and we would ask them very specific questions which would 95% of the time address really all of the questions that we would have and based on that conversation we would determine our value for … that [portfolio] company. We may or may not agree with what they have said to us about the company or what they think is possible based on … you know … our own experience having doing this for … quite some time – Maria (MD/9)

In some cases the due-diligence team evaluating a secondaries opportunity also talks to other investors invested in the PE fund under consideration and frequently the due-diligence team also engages in discussions with the primaries team if DG had invested in the PE fund at the time it was originally fund raising. Even here we see the difficulty for the due-diligence team to get an adequate impression of the companies' financial situation based solely on the reports of the GP.

As the above discussion has suggested, since the secondaries business of DG invests in PE funds which are at least 60% invested, the relative importance assigned in the investment evaluation is based more on the quantitative valuations[10] of the existing portfolio rather than on the qualitative aspects of the GP (such as the strategy of the PE fund, quality of the investment team, etc). However this does not mean that such qualitative aspects of the GP are of no importance to the secondaries team. In order to ascertain if the unfunded portion will be invested wisely in the future, the secondaries team also focuses on the qualitative aspects of the GP. As Rupert stated:

> …you have to be sure that the unfunded that's going to be invested and you pay for 100% is great right. That brings me back to the manager – (VP/11)

The relative weight/importance given to the qualitative aspects of the GP in the evaluation of the secondaries opportunities varies depending upon the level of unfunded portion of the opportunity [which represents the "blind pool" risk]. As Rupert explained:

> The more unfunded the transaction opportunity becomes, the more I become a primaries guy right. If it is 100% funded I don't require that. The manager could be really bad but the assets are great – then it's all about how he exists – Rupert (VP/11)

6. Due-diligence practices and material arrangements

The due-diligence teams embark on a formal due-diligence process with the help of an investment management [IM] template (which is in the form of a MS Word document). The IM template has several headings which highlight the various aspects/issues which need to be considered for primaries due-diligence. The IM template is very long and it runs across

[10] As discussed earlier, we do not deny/undermine and very much recognize the qualitative judgement involved in performing the quantitative valuation of portfolio companies.

several pages. It constitutes an internal rule, for both primaries and secondaries teams which seeks to assist the investment evaluation, to address all the issues/aspects relevant to an investment decision.

The IM template constitutes a list of aspects that the team/analyst should work through for every due-diligence. The template is classified into 3 parts. The first part of the template[11] is an executive summary [Please see appendix 4]. So in the first part, the due-diligence team has to summarize its views of the investment proposal, highlight the merits of the proposals, any concerns related to the proposal (and the actions, if any, taken by the GP to resolve the concerns), and comment on the financial track record of the GP's prior funds. The investment team has to rate the GP (the underlying manager with whom they would invest), the strategy of the fund, the competitive advantage, track record, the partnership terms, and corporate social responsibility initiatives of the GP. The rating has to be, as we can see from the template, one of the following: Exceptional, Sound, Acceptable, Potentially weak. This summary is based on the detailed analysis which is carried out in the second part of the template.

In order for the due-diligence team to be able to summarize its views in the first part of the template, the team is guided by the detailed list of issues which are in the second part of the template. Here the due-diligence team has to analyze and inscribe its views on several aspects such as: the quality of the GP, the strategy of the GP, the current market environment, the historical performance or track record of the GP, outcomes of the meetings held with the GP and the reference calls made to enquire about the GP, and the various processes of the GP (For e.g., deal sourcing, investment evaluation and due-diligence, post investment monitoring, exit planning, quality of reporting to investors, etc).

The third part of the template offers space to present various exhibits. Examples of a few exhibits include: Biographies of the investment professionals, age distribution of the investment professionals, board seat distribution, quantitative analysis (of the performance of the GP's prior funds and their portfolio companies), sector team analysis of the GP, List of portfolio companies, etc.

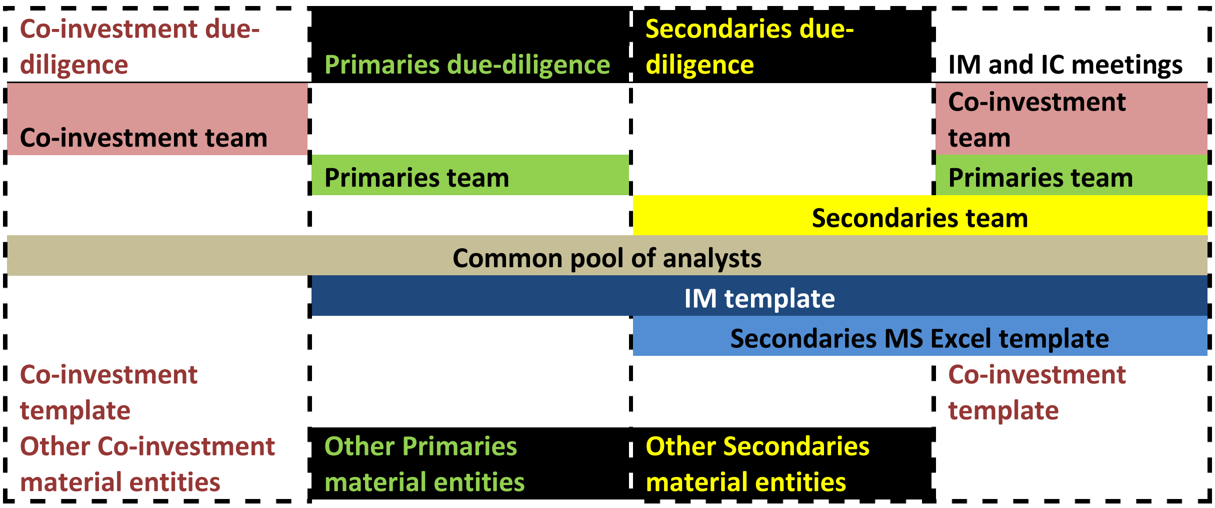
In conducting the due-diligence process of investment opportunities and presenting the analysis, the secondaries team uses the same IM template that the primaries team uses.

[11] The entire template is not reproduced in this paper as DG classifies this template as confidential and for internal use only.

However, IM template being a MS word document does not allow for performing various calculations which the secondaries team would like to perform (such as, determining the appropriate discount level and the price in order to achieve the "teleology" of the respective fund of fund, valuation and cashflow analysis of the portfolio companies of the investment proposal under consideration, etc). Hence, in order to perform these calculations the secondaries team uses another MS Excel template in addition to the IM template discussed above. So both the IM template and MS Excel template form an important part in the due-diligence of the secondaries opportunities.

<u>'Constitution':</u> As discussed earlier, according to Schatzki (2010a), material arrangements 'constitute' practices by being pervasively involved in the practices and by being essential to the practices. Since both primaries and the secondaries teams use the same IM template to conduct and present the due-diligence analysis, we can argue that the IM template 'constitutes' (ibid) the due-diligence practices of both the teams. However, the MS excel template which the secondaries team uses to arrive at the discount and pricing levels is the creation of the secondaries team and is used only for the secondaries due-diligence and not in the due-diligence of primaries or any other business of DG. Hence we can argue that the MS excel template [discussed above] 'constitutes' the investment practices of the secondaries business alone. Figure 1 below provides a simplistic representation of the material entities which 'constitute' the various investment management practices at DG. As we can notice, there are some entities which 'constitute' more than one practice leading to overlaps and coherences in the investment management practices at DG.

Figure 1: Simplistic representation of material entities composing various investment management practices at DG



'Causality' and 'Intelligibility': A "type of causal transaction in social reality is embodied in people's acting in response to actions and states of affairs" (Schatzki, 1988, p 153). Talking about the IM templates, Rupert stated:

> I would say they are in a sense a check list - yes. For example … I mentioned earlier what my expectation on the unfunded is? I could ... easily forget ... that right, it's possible a human error and you have a diligence call and you forget … for example what the GP thinks he will do on the unfunded or you just don't cover it because you don't have such an excel [spreadsheet]. So doing the whole diligence without the excel [spreadsheet] and without such a memo is difficult ... – Rupert (VP/11)

The IM template and the MS excel spreadsheet used in the due-diligence act as check list within DG. They remind the person performing due-diligence of important aspects to be taken into consideration while evaluating investment opportunities. By reminding them of the important aspects, the templates induce response from the investment professionals.

An important 'project' as part of the due-diligence 'practices' of DG is to evaluate the various aspects/issues suggested in the IM template and prepare a due-diligence report out of that. So the due-diligence teams provide their responses to the various aspects/issues listed on the templates. Let's consider an example. One of the important aspects of the due-diligence is the 'succession planning'. So succession planning analysis can be considered one of the 'tasks' as part of the 'project' – of inscribing the analysis on the IM template and preparing the due-diligence report. In order to perform this 'task' of succession planning analysis, the analyst carrying out the due-diligence performs several actions (bodily doings and sayings). For example, the analyst finds out the ages of the senior partners and directors and other employees of the fund under consideration by looking at the offer documents or the GP's website or any other source. The analyst also identifies the years of experience with the GP of each investment professional. Then the analyst identifies and singles out those investment professional(s) whose age as of the date of due-diligence is over 50 years. Particular attention is paid to the senior investment professionals. If the ages of one or more senior investment professionals is over 50 years, then the analyst ascertains if the GP has made any succession planning for the individual(s) over 50 years old. Which investment professional(s) will take on the responsibilities of the individual(s) over 50 years old and at what point in time? Another important aspect which follows is to make sure that DG is happy with the experience and expertise of the investment professionals at the GP who would be replacing those individuals (over 50s'). Having performed this analysis, the person conducting the due-diligence inscribes his views on to the IM template. In the above example we may argue that the actions undertaken by the analyst as part of performing the 'task' of succession planning analysis were undertaken *in response to* the specific aspect listed in the IM template. Hence we argue that the [various parts of the] templates induce 'causal' response from the due-diligence teams.

As one may imagine, the responses which [the various parts of the] templates induce in terms of the actual actions performed can be quite varied between and even within the primaries and secondaries teams. The actual actions performed in response to the [various parts/aspects of the] templates depends on how the encountered aspect makes sense to the investment professional in the context of the investment proposal under evaluation. As Schatzki (op. cit., p 155) argues what "makes sense to people to do is determined by factors such as knowledge, how things matter, the states of existence for the sake of which they are prepared to act, the rules and paradigms they follow or observe, and the ways they have been socialized to act as a matter of custom". In the following we shall explore some of the differences in the responses to the templates and the 'intelligibilities' in play while addressing a few aspects of the templates.

Whereas in the case of the primaries business the outcome of the due-diligence analysis which is inscribed in the IM template turns into an investment memorandum of approximately 50-60 pages, in the case of secondaries the report is often much shorter[12]. Rupert from the secondaries team explained a few reasons as to what the differences are and the reasons for this.

> We basically have a lot of information in the excel sheet and our memos … [are] shorter than [those that] … the primaries people have on their end. So it doesn't mean that it is less deep … we are not as wordy I would say compared to primaries report... just to give you an example what is not so important from our end is say you have a fund that is 98% funded so it's very mature and you have previous companies in there, it's not as critical if the team of the general partner is top notch or not? It is [still] … important of

[12] This is for a single fund. However, if the secondaries team is evaluating an investment proposal which consists of more than one fund [portfolio of funds], then in such cases the investment memorandum can be much longer depending on the number of PE funds which constitute the portfolio being evaluated.

> course but we look mainly at the fixed assets that are left in the portfolio vis a vis the primary guys who are very interested in the team itself because they basically back all their data with regards to what happened with the general partner in the past … right. So if they have done interesting deals in prior funds and will their next fund be as good as they hoped it will be? That's the main question of a primary colleague. My main question is are the companies that [we] are buying through that vehicle are they good enough and is the GP correct in his exit expectations and am I in line with these. But if they have a team turnover of 10% vis a vis 15% it's not so much of an issue to me – Rupert (VP/11)

The above quote not only highlights the differences of responses to [the various aspects of] the template both between and within the primaries and secondaries teams but also the relative importance which the teams assign to various aspects of the investment proposal under consideration. In the above example explained by Rupert, the "blind pool" risk of the proposal is very low (just 2% represents blind pool, as the fund is already 98% invested). In this case the secondaries team focus much of their attention on the funded portion which represents the actual investments (portfolio companies) of the PE fund under consideration rather than the quality of the investment professionals at the GP or the past performance track record of the GP. However if the "blind pool" risk is higher, the secondaries team shift more of their attention on the quality of investment professionals at the GP and the past performance track record of the GP [and other qualitative criteria discussed in the primaries due-diligence] in order to ascertain if the unfunded portion will be invested wisely in the future. In case of secondaries, the more unfunded the transaction opportunity becomes, the more the team focuses on aspects which the primaries team focuses on. On the contrary if the secondaries investment opportunity under consideration is 90 to 100% funded then the focus of the secondaries team is much more likely to be mainly on the assets [portfolio companies] and much less on the quality of the GP and his prior track record.

Above we have seen some of the difference in responses between primaries and the secondaries teams to the various aspects of the IM template. Let us now explore some differences in response to the various aspects of the IM template within the secondaries teams. In the above example we have seen that the secondaries team focus on the quality of the GP (in order to evaluate whether the unfunded will be invested wisely or not) depending on the "blind pool" risk (unfunded level). Now the actual actions which the secondaries team perform in order to evaluate the GP vary depending on whether the primaries team is familiar or invested with the proposed fund or not. If the primaries team has already evaluated/invested in the proposed fund when the PE fund was fund raising initially then the secondaries team does not re-evaluate the fund and the GP from the scratch. The secondaries team, in such cases, evaluate any changes to the quality of the manager since the time the primaries team had performed their evaluations. Rupert explained that in such cases the secondaries team goes through the earlier diligence report prepared by the primaries team for the details of the biographies of all the investment professionals at the GP firm and look if there have been any changes since then but the secondaries team does not replicate all that information again while writing the due-diligence.

The above discussion has evinced that the templates induce causal responses from the due-diligence teams by leading them to perform certain actions. It has also evinced that the actual actions in response to [aspects of the] template vary depending on how the encountered aspect makes sense to the investment professional in the context of the investment proposal under evaluation. As Schatzki argues, how a person responds to any entity or state of affairs "depends not only on what it is but also on other factors such as that person's ends and projects, his or her knowledge and skills, his or her moods, and various rules, paradigms, and customs. The fact that a totality of such factors determines the response does not alter the fact, however, that the person responds to something. The latter causes the action, whereas the other factors … condition it" (op. cit., p 154). In our case, the entities to which the investment professionals respond are [the aspect(s) of] the templates and the various other factors in the context condition the actual actions in response to [aspect(s) of] the template. The above discussion has also highlighted the connections, overlaps, and dependencies among the practices of the primaries and secondaries businesses within DG. This leads us to the discussion on 'prefiguration'.

<u>'Prefiguration':</u> As explained earlier, in Section 2 of this paper, 'prefiguration' is the "qualification of possible paths of action on such registers as easy and hard, obvious and obscure, tiresome and invigorating, short and long, and so on" (Schatzki, 2010a, p 140; see also: Schatzki 2002, ch. 4). In our case we saw that the practices and entities of primaries team 'prefigure' the practices of secondaries team. As Rupert (the vice president of the secondaries team) explained:

> It's obviously helpful if you know the fund well, for example one that is tracked by the primary colleagues anyway and [we] get AGM data that I can look [at] … If the primaries colleagues don't have a good connection and don't know the fund well … [then] it's hard for me to judge … and there I am a bit on my own … right. It's not that I can base anything on my primary colleagues' information ... Obviously I do a call then with the GP – (VP/11)

So if the secondaries team gets to evaluate an opportunity to invest in a PE fund which the primaries business is familiar or currently invested with, then it becomes easier for the investment professionals of the secondaries team to evaluate and take a decision on the proposed investment opportunity. This is because they would not only have better knowledge of the fund, its performance, and its progress from internal sources but will also be aware of the opinion/view of other DG colleagues about the performance of the fund, its managers and its underlying portfolio companies. On the contrary if a proposed fund is not something that the primaries business is familiar or currently invested with, then it is much more difficult and time consuming for the secondaries professionals to evaluate the investment opportunity and form a view on such an investment. However as, Maria (the co-head of the secondaries business) explained:

> … it's rare that we look at a portfolio of 6 funds and we are [invested] in one of them [from the primaries business]. It's usually we are in 5 funds … out of 6 [funds] – (MD/9)

The above quote indicates that the practices and the entities of the primaries team significantly 'prefigures' the practices of the secondaries team.

The IM template 'prefigures' the due-diligence practices by acting as a check list and reminding the due-diligence teams of the key aspects to be considered while performing due-diligence. Moreover, since the due-diligence team inscribes its analysis on the IM template, it can be argued that the IM template 'prefigures' due-diligence practices also by facilitating the presentation of the analysis required or prompted by it. Once the due-diligence team finishes inscribing its analysis and review of the investment opportunity on to the template, the template then becomes a report which is internally referred to as 'investment memorandum' report. This report is then presented in the weekly investment management meetings for discussion and vote. So the IM template 'prefigures' also the investment management meetings by facilitating the discussion and decision making on the investment opportunity at the investment management meetings.

The MS Excel template used by the secondaries team prefigures mainly the secondaries due-diligence practices as it is a creation of the secondaries team and it is useful mainly for the secondaries team in their due-diligence. However, since the investment memorandum reports (which is prepared partly as a result of filling this template) constitutes the investment management meetings, it also 'prefigures' the investment management meetings by facilitating the discussions on the respective investment opportunities.

One might ask: How is the 'causal' relation between the practices and material arrangements different from the 'prefigurational' relation between them? The answer is as follows. 'Prefiguration' according to Schatzki is the "qualification of possible paths of action" on certain registers (Schatzki, 2010a, p 140; see also: Schatzki 2002, ch. 4). On the contrary, "causality" pertains to "making actual, not the making possible, of something" (Schatzki, 1988, p 168). As Schatzki argues, "just because something makes something else possible does not in itself mean that it in any way causes the latter" (ibid). As he further explains, "although, of course, making actual presupposes that what is made actual has already been made possible, its being made possible is not in any way responsible for its actually, as opposed to its possibly, existing" (ibid). In our case we can see that the 'practices' and 'material entities' of the primaries team 'prefigure' the practices of the secondaries team but do not 'cause' them. They 'prefigure' the practices by acting as factors that 'condition' the actions which the secondaries team performs in response to the templates. So the 'causes' of the actions of the secondaries team is the template and not the 'practices' and other 'material entities' which 'constitute' the primaries team.

The final outcome of the due-diligence is a detailed report in which the due-diligence team documents its analysis of the investment proposal. Having ascertained the quality of the investment proposal, the due-diligence team inscribes its detailed analysis and opinion in the due-diligence report which is internally referred to as 'investment memorandum'. As the above director stated:

> …due-diligence…culminates in a document which we call the investment memorandum which is normally about 60-70 pages long on each fund – Jane (Director/5)

This investment memorandum is then presented to the internal investment management meetings and the investment committee for discussion and final vote.

7. Investment management meetings

> "calculation … is not the end of the story, but rather the starting point of the process of 'calculating with something', that is, … interpretation" (Kalthoff, 2005, p 74).

Every week on Monday's all the members of the PE investment management team across the globe at DG meet over a conference call. These meetings are called investment management meetings. During the course of the due-diligence and after the preparation of the investment memorandum the due-diligence teams present their ongoing and final evaluation of the investment proposal at the investment management meetings to be reviewed by their colleagues. As Jane explained:

> [The investment memorandums are] presented to the whole … investment management team. Everybody is encouraged to have an opinion and to ask questions, because they may look at something differently, they may have thought of something we haven't, sometimes you get too close to a GP, so it's a really good common sense check – (Director/5)

Jane explained a discussion which occurred in a recent investment management meeting which she was part of:

> For instance yesterday we had a good discussion on a US life science fund ... their more recent portfolio … was largely unrealized … the people that had done the due-diligence were looking at the predictions as to where they thought the portfolio was going and they had got a few tables in there showing exit values… Then there was a question raised by a colleague who said: 'actually no you have got these predictions but the predictions are very different from the current values and how do you substantiate that you know? You can't just plug figures in there. Why do you think that's going to be exited at 3 times or 4 times when it is valued only one time'? So that team is going to go back and do little bit more work to say why they believe that. I had asked a question also … questions could be about all sorts of things. It

could just be well I have heard a rumour in the market that this person isn't happy and this person is going to leave. It's whatever everybody knows from their knowledge – (Director/5)

So as evinced by the above quote, it is through these investment management meetings the (senior) investment professionals alter and shape the 'teleological structure' (i.e., the end-project-task combination) by demanding further analysis from the due-diligence team or by suggesting the due-diligence team to perform specific tasks to enhance their understanding of the investment proposal under consideration[13]. In the above case the due-diligence team would go back and try to analyze and provide further information in order to justify their valuations. The investment management meetings also maintain and shape the 'practical intelligibility' of the investment professionals. They do so by asking the due-diligence team various questions related to the investment proposal and investment memorandum in particular and also about the GP in general. In the above case for instance, one of the committee member asked a specific question regarding a member of the investment team at the GP who is unhappy and may leave the GP.

The investment management meetings not only shape the practical intelligibility of the investment professionals who present their due-diligence, but also other investment professionals in the meeting who are listening to the proceedings and reviewing the investment memorandum. As Schatzki (1988, p 156) argues, what a person lives through or experiences plays a major role in moulding practical intelligibility. Through observing and participating in the discussions of the investment management meetings and focussing on the instructions to the due-diligence teams on various aspects of the investment proposal, the participants acquire certain knowledge and skills. As a consequence we would argue that those attending investment management meetings are influenced into certain ways of PE practice and their view on and responses to certain promptings are moulded to reflect these experiences. Hence he investment professionals at DG become more sensitive to certain factors and ways of proceeding and not others – certain rules, pieces of knowledge, ways of mattering, and ends etc take precedence over others – subsequently determining how to carry on, how to respond to actions and what makes sense for the investment professionals to do (ibid).

[13] Please note: By demanding further analysis and by specifying the due-diligence teams to perform further tasks, although the senior investment professionals alter or shape the tasks within the 'teleological structure', they are maintaining or continuing the ends and projects with the 'teleological structure'.

After an individual investment memorandum has been presented 2 or 3 times in the investment management meetings for discussion and when the due-diligence team has addressed all the questions and queries of the people in the investment management meetings, then the investment proposal is put to a vote. Once a proposal receives a positive vote at the investment management meetings, then it is presented to the investment committee for a final vote and decision on the proposal. In most PE firms the final say on the investment decisions is held by the investment committees. The senior investment professionals of the firm sit on this committee. It is the same at DG too. The investment committee at DG is composed of 5 members: the head of the investment management - US, the head of the investment management - Europe, global Co-head of co-investment, the head of research, and the CEO.

8. Discussion

Primaries Vs Secondaries due-diligence

In section 5 we explored some significant differences in the approach taken to the due-diligence process in the evaluation of a primaries investment opportunity as opposed to a secondaries opportunity. We saw that the due-diligence within primaries is conducted based mainly on qualitative aspects related to the background of the PE fund and its management team. Most of these aspects cannot be transposed into or evaluated through any form of quantitative analysis.

The opposite is the case for the way the due-diligence of secondaries opportunities is constructed at DG. Here the due-diligence process involves substantial quantitative analysis. We noted that this difference in approach between primaries and secondaries investment opportunities is because of the different nature of the investment opportunities. In the primaries business the investment opportunities do not represent any underlying “real” assets. They are 100% ‘blind pools’ which represent investment programmes which will be invested in “real” assets in the subsequent 5 to 6 years by the investment professionals of the PE fund under consideration. On the contrary, the investment opportunities in secondaries represent DG investing and committing funds to take partial ownership in a “real” asset bundle [the underlying companies] through the PE fund (funded portion) alongside a legal obligation to contribute capital to the PE fund in the future (currently unfunded portion) as and when the GP calls for capital from the LPs’ to make further investments in “real” assets.

The extent of 'blind pool' in an investment opportunity 'prefigures' [by facilitating or limiting] the performance of numerical/quantitative analysis in the evaluation/due-diligence of investment opportunities. In the primaries business, since the investment opportunities are 100% 'blind pools' and do not 'constitute' or represent any underlying "real" assets, the investment professionals at DG cannot perform any financial or economic analysis of the investment opportunities. As discussed earlier in section 5, they are forced to evaluate the investment opportunity on the basis of several qualitative criteria such as the strategy of the PE fund, key terms of the partnership agreement, quality, expertise, and cohesiveness of the management and investment teams at the GP and their past track record, etc.

Some quantitative evaluation is done in Primaries. The due-diligence team within Primaries evaluate the financial performance and conduct financial analysis of the previous/predecessor funds [where applicable] managed by the GP of the PE fund under consideration. But the relative weight or importance given to such analysis in the overall decision making process, on whether to invest or not, is very limited. This, as we mentioned earlier, is due to (a) the impossibility for financial reports to show some underlying "reality"[14] or the future potential of the current PE fund under evaluation; and (b) the recent and current macro-economic circumstances.

The due-diligence teams in Primaries judge the PE fund and form a view about it based substantively on a range of qualitative criteria. Hence we argued that the primaries due-diligence is essentially a non-numerical calculative practice in which the investment professionals at DG form a view/judgement *upon* the investment proposal under consideration supported by *with* a mix of qualitative criteria about the GP and the PE fund (Heidegger, 1954; Kalthoff, 2005; Stark, 2009). Hence, the social 'site' (Schatzki, 2002) which the PE fund is part of is evaluated and also the elements 'constituting' the PE fund (i.e., the GP's investment professionals, their experience, their prior track record, etc) are taken into consideration in order to determine the quality of the investment proposal (PE fund under consideration).

Unlike Primaries, the investment opportunities in the Secondaries business represent partial ownership in a "real" underlying asset bundle through the PE fund and a 'blind pool' of up to

[14] Accounting literature has long argued the incomplete representational ability of the accounting inscriptions (Busco & Quattrone, 2012; Robson, 1992)

40%[15] (unfunded portion). The presence of the "real" assets (underlying portfolio companies) means that the due-diligence teams of DG are able to evaluate the investment opportunity, at least partially, by conducting quantitative financial analysis on the underlying portfolio companies. In evaluating the funded portion, the investment professionals at DG focus their analysis (financial forecasts, NPV, DCF, etc) mainly on those portfolio companies which the fund has bought recently or in the last 2 years as these companies will be reflected at their purchase price or marked up only minimally to reflect the 'fair values' (Laux & Leuz, 2009). These are the companies which the PE fund under consideration is currently working on adding value to and hence these provide the "uplift opportunities"[16] for DG which would potentially increase in value, in the period, after the DG's investment into the PE fund. DG is not so much interested in those companies which the PE fund had invested 4-5 years ago and which are already marked up significantly to reflect the 'fair value' as the PE fund would have worked on those companies for the previous 4-5 years and hence according to DG these companies would offer very minimal or no uplift or increase in value after their investment into the PE fund. On the contrary, DG looks at those portfolio companies as a risk as there is no guarantee that the companies would be sold at the fair values reported by the GP.

An easily notable difference in the evaluation of the secondaries opportunities as opposed to those facing primaries is that the outcome of the evaluation of the secondaries opportunities is not only to determine whether DG would invest in the specific opportunity but also the price range [or range of discount to be applied to the recent NAV reported by the GP for the "real" assets (funded portion)[17]] in which DG would buy the PE fund interest [if at all]. The due-diligence teams evaluating the secondaries opportunities have to come up with a price range at which the transaction would make sense to DG keeping in mind the 'teleology' (Schatzki, 1996, 2002, 2010a) of DG's secondaries funds. As Rupert explained:

> …we have certain underlying criteria that we need to have for our fund which are in the 1.6 to 1.8 multiple range in the 20% IRR range to basically come up with a deal that makes sense for us and to work on that specific lever we need to play around with the discount – (VP/11)

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[15] Since DG's secondaries business invests in PE funds only if they are at least 60% invested.

[16] Those portfolio companies which the underlying PE fund [GP] has purchased recently whose valuations may increase in the next 3-4 years. Please refer Talmor and Vasvari (2011), Yates and Hinchliffe (2010), Klier, Welge, and Harrigan (2009) and Nisar (2005) for discussion on the various ways in which the PE funds improve the value of their portfolio companies.

[17] Rupert, one of the vice presidents in the Secondaries team, explained that usually the buyers of PE fund interest on secondaries market don't get a discount on the unfunded portion, they only get it on the NAV.

Notwithstanding these differences in the approach to due-diligence between primaries and secondaries, there are important similarities. Firstly, while analyzing the unfunded portion of a potential secondaries opportunity, DG's investment professionals evaluate it as if they were analyzing a primary opportunity. This is because the unfunded element of a secondaries investment is a 'blind pool' as are all primary investments.

Secondly, the evaluation of the funded portion of the secondaries opportunities is based on the anticipated future revenues, profits and exit values of the portfolio companies held by the PE fund. DG's investment professionals construct these numbers based on the accounting disclosures in the fund performance reports produced and made available to LPs by the GP. In these accounting reports the portfolio companies are represented on the basis of their 'fair values'. The analysis conducted at DG also takes into account discussions held with the investment professionals at the GP who are managing these portfolio companies.

It is notable that subsequent to the recent financial crisis, GPs "themselves have been navigating blind, finding it very hard to reliably predict forward revenues and profits for their portfolio companies" (Burdel, 2009, p 535)[18]. So although DG's investment professionals estimate the financial value of the "real assets" based on the reports and other information obtained from the GP and also based on the discussions with the investment professionals at the DG, these numbers are subject to significant assumptions and judgement and so are inherently subjective. As Kalthoff (2005, p 90) argues, there is no independent reality external to the economic representations (figures/numbers/reports) that embody reality. Hence, even though the secondaries business evaluates its investment opportunities, at least partially, by conducting numerical analysis on the underlying portfolio companies ["real" assets], the numbers [economic representations] on the basis of which they perform the analysis and make judgements upon the investment opportunity are not "real". The economic representations are 'creations' which are the outcome of 'operative writing' [i.e., calculation procedures, formulae, categories, etc] (Kalthoff, 2005; Rheinberger, 1992; see also: Knorr-Cetina, 1981; Latour & Woolgar, 1986). Consequently, we would argue that while the Secondaries investment evaluations look significantly different to those in Primaries because they consist, in part at least, of underlying assets, a significant element of any commitment to the investment is represented by unspecified future investment opportunities, 'blind pools.'

[18] For recent debates on the reliability, pros and cons of fair value accounting, please refer: Benston (2008), Penman (2007), and Véron (2008).

Other writers have raised similar concerns to those we raise above about the role of judgement and subjectivity in the creation of investment values. Callon and Law (2005, p 719) suggest that "we … [ought to] think in the same terms about (quantitative) calculations and (qualitative) judgement. That … [these evaluations and judgements] are all about arraying and manipulating entities in a space in order to achieve an outcome, a conclusion" (See also: Callon & Muniesa, 2005; Stark, 2009). Drawing on the neologism coined by Cochoy (2002), Callon and Law (op. cit., p 719) explain that qualculation refers to "calculation, whether arithmetical in form or not, the manipulation of objects within a single spatiotemporal frame – which can be done in indefinitely many ways". We argue that the preparation of the investment memorandum and other documents associated with the evaluation of PE investment opportunities in either primaries or secondaries can be seen as illustrations of the application of 'qualculative' practices. We have summarised above the construction of these investment evaluation documents which combine numerical calculation with qualitative evaluations of target investment opportunities in the PE industry. We have used the practices at DG to illustrate the complex fabrication of; judgements about the quality of GPs' management and investment teams; the problem of assigning value to 'blind pools'; the reliance on forecasts of cash flow derived from accounting reports and the related judgements about macroeconomic performance.

Moreover, in both cases: Primaries and Secondaries, the investment memorandums are not neutral devices depicting some sort of reality 'out there'. Rather, they are constructions of the due-diligence teams which offer a specific view upon the investment proposal under consideration (Kalthoff, 2002, 2005).

Prefiguration Vs Causality

Drawing on the case material related to investment evaluation/due-diligence practices at DG we have explored how the various 'practices' and 'material arrangements' in the primaries and secondaries business form practice-arrangement bundles. In Section 6 we explored the relations between some of the due-diligence 'practices' and 'material arrangements' at DG. With the help of the empirical material of the case we have also demonstrated and/or clarified how practices and material arrangements exert different influences on the practices by way of 'prefiguration' and 'causality' (Schatzki, 2010a). As discussed earlier, practices and material arrangements prefigure other practices by qualifying possible paths of action on certain registers (Schatzki, 2010a, p 140; see also: Schatzki 2002, ch. 4). To the contrary, “causality” pertains to “making actual, not the making possible, of something” (Schatzki, 1988, p 168).

In our interpretations of the case setting we explained how the various practices of the Primaries team ‘prefigure’ the practices of the Secondaries team. When a Secondaries team is evaluating an investment opportunity which the primaries team is familiar with or currently invested in, then it is easier for the secondaries team to evaluate the opportunity. On the contrary if the secondaries team is evaluating an investment opportunity primaries team is not familiar with, then the secondaries team has to put in much more effort in evaluating the opportunity. We also saw that, a material artefact, the IM template ‘prefigures’ (in this occasion, makes easier) both the primaries and the secondaries due-diligence practices by reminding them of the key aspects/issues to be considered while performing the due-diligence. The IM template also ‘prefigures’ the investment management meetings and also the presentations to the investment committee as the due-diligence teams inscribe their analysis on the IM template and ‘translate’ (Latour, 1987; Robson, 1991) it into an investment memorandum which is referred to during the discussions at these meetings.

We also saw that in the complex chain of actions composing the due-diligence and other investment management practices at DG, the IM template induces certain responses from the due-diligence teams and hence we argued that it ‘causes’ certain actions. So in some situations, the IM template does have both ‘causal’ and ‘prefiguring’ influences on the practices. So, if a material entity can make some actions possible on certain registers, it *may* also be able to make them actual [i.e., cause them]. However, it is not necessary that a material entity that makes some actions possible [on certain registers] has to also always make those actually happen.

From our experience of applying Schatzki’s versions of two social arrangement concepts: ‘prefiguration’ and ‘social causality’ to make sense of the empirics, we feel that it is relatively easy to identify in an empirical setting if [and how] certain practices and material arrangements ‘prefigure’ certain other practices. However, we feel that identifying the causal relations in a definitive manner is rather challenging. In Primaries, we can argue that because the ‘blind pool’ is 100% certain practices are essential. In Primaries this results in the team assessing investment opportunities by examining several qualitative factors as discussed earlier in section 5. We argue that this may be seen as a ‘causal’ effect, of the extent of a ‘blind pool’ in an investment opportunity, on the nature of evaluation practices of Primaries.

In Secondaries, the existence of underlying assets clearly 'prefigures' the [possibility of] performing quantitative financial analysis. However, it has been very difficult for us to determine definitively if the degree to which the investment opportunity is represented by a 'blind pool' or not actually 'causes' the quantitative financial analysis to be the 'obvious' or required practice to engage in.

Practice memory

Much of our forgoing discussion, especially on 'prefiguration' and 'causality', is also necessarily closely related to the idea of practice memory. Here we briefly expand the discussion of practice memory to other practices at DG. Schatzki (2010b, p 166) argues that "the persistence of practice organizations over time is a type of memory – practice memory". In the case of DG, as we saw earlier in Section 7, how the investment evaluation practices rely on 'practice memory'. The continuation of practice organizations such as 'teleologies' and 'projects' within the 'teleological structure' and the shaping of 'practical intelligibilities' is achieved and secured through the interactions/discussions and debates at the investment management meetings.

Once the due-diligence responsibilities are allocated, the analysts/associates commence the due-diligence by going through all the available information (about the particular GP and the PE fund) which DG has accumulated so far. During this review, the analysts/associates also identify the questions/issues which need to be discussed during the due-diligence conversations with the GP (either via a phone call or face to face meeting). After performing this desk review, the analysts/associates start recording their [initial] analysis on to the IM template and then present it to the investment management meetings where they raise further issues and questions related to the particular investment opportunity. As a senior investment professional at DG explained,

> …[we] hear it [the initial evaluations of the investment opportunities] on the investment management discussions and we … steer it at that point and say look this is all very well but have you thought about this? Have you thought about that? And this is a concern to me; can you take a look at this and address it? – MD/7

As we mentioned earlier, the due-diligence teams present the investment memorandums at different stages [initial and final evaluations of the investment proposals] (at least two iterations taking place) at the investment management meetings to be reviewed by their colleagues.

The continuation and reinforcement of 'teleologies' and the shaping of 'practical intelligibilities' also happens within the due-diligence teams while the investment professionals are working on their day to day activities. As we mentioned earlier, the due-diligence teams always constitute at least one senior investment professional who is always guiding and advising the junior members in the due-diligence team on what to do, how to proceed with a particular analysis, etc and hence shaping their 'intelligibilities'. Here we see how the personal memory of some participants in the practice (for example, the senior investment professionals) helps in shaping the 'teleological structures' and 'practical intelligibilities' of the junior investment professionals at DG. Moreover, the investment memorandum templates and the various MS excel spreadsheets can also be argued to be carriers of practice memory as the various headings within the templates (which remind the investment professionals undertaking the due-diligence of the important aspects which need to be considered as part of the due-diligence) can be argued to be the rules to be followed during the due-diligence/investment evaluation.

Presentations to and the discussions with[in] the Investment Committee also shape the 'practical intelligibilities' of the investment professionals with regards to the investment criteria. These presentations also serve as a rehearsal of the organisations practice memory and help to further sediment it within current practices. As Rupert stated:

> What I learnt from it [discussions with(in) the IC] basically is how the IC thinks and what they are looking for [in specific transactions] … [and this] will help me for the next transaction I show to them – (VP/11)

One of the investment committee member's explained a situation where a particular investment opportunity was rejected by the IC on the basis that 2 members of the IC were unhappy about the investor relations [client service] wing of the particular GP. As the member of the IC stated:

> ... well two people [in the investment committee] felt very uncomfortable with the investor relations arm of a [PE] firm [under consideration] and … although the 3 of us were extremely comfortable with it … we said no [to the investment] – MD/7

While the above example might show the disregard of the IC towards the detailed due-diligence work performed so far on the particular investment opportunity, it also reflects the continuous shaping of practical intelligibility within the firm through the discussions in the IC. Members of the committee and investment professionals, like Rupert, charged with carrying out due-diligence and presenting investment opportunities to the IC are all engaged in activities that rehearse and develop existing intelligibilities that are bound up with site ontology. The latter quote also refers to an important intelligibility, that of privileging consensus decision making, which is regularly stated and consistently observed in the IC meetings. So while there is some general understanding of the importance of various aspects of an investment opportunity, which aspect of the opportunity takes precedence at IC and becomes a key factor in deciding on whether to go ahead with an opportunity or not is something that emerges and is assessed specifically for each and every transaction. So, although the [potential] financial performance and financial returns may seem to be the [main] deciding criteria, it is only deceivingly so.

9. Conclusion

We have sought to provide a rich and theoretically informed understanding of the behaviour of practitioners in the PE industry in this paper. We report the practices within a single large PE asset management firm. Our focus had been on the nature of micro level practices as they impinge on due-diligence processes which constitute the business model of this part of the PE industry.

Our theorisations have been based on elements of Schatzki's (1996, 2002, 2010b) 'site' ontology. While we draw on Schatzki's practice theory more generally we have attempted in this paper to extract those concepts which provide us with the most purchase on the practices which we wished to study and provide an understanding of. While our general approach to the site is therefore governed by Practice Theory we have sought to mobilise some of Schatkiz's more micro level constructs in order to explain the PE practices that we have observed.

Our theorisations have also been influenced by ideas from the sociology of finance literature. These latter concepts have provided us with ways to highlight the role of calculative practices which do not form a particular focus of Schatzki's constructs. We agree with other writers (Beunza & Stark, 2005; Kalthoff, 2002, 2005; 2007; see also: Knorr Cetina, 2011) who argue that "problems of valuation and calculation" should be placed at the centre of a research agenda that seeks to comprehend the impact on economic and social life of the calculative practices that inhabit our monolithic financial institutions.

The concepts we have taken from Schatzki include 'prefiguration', 'social causation', 'constitution', 'practical intelligibility' and 'practice memory'. Of these constructs we have found much more to say about 'prefiguration', 'practical intelligibility' and 'practice memory'. We have reconsidered the application of these theoretic constructs in the previous section where we further examined their contribution to our theorisations and attempted to explain the difficulty of identifying 'social causality' with a practice theory framework. We have said little about 'constitution' primarily because we regard this as a reasonably self-evident feature of social 'site' analysis. Schatzki has provided us with rich theoretical concepts to analyse and identify the processes which surround social action and try to break up the nature of the complexity and ongoing nature of these critical and yet poorly understood and researched PE investment practices as they [re]occur in the 'site' we have studied. We provide a valuable addition to the literature in this regard by presenting a carefully theorised understanding of a neglected area of the financial services industry which has hitherto been neglected in spite of the huge size of the sector (over USD 3 trillion in global assets[19]) and its impact on other critical elements of the economic system. Drawing on the empirical material from our case study of the investment management practices of a large PE asset management firm we have identified and explained important work practices that shape the complex investment evaluations and investment decisions that are made in the PE industry.

We report a number of aspects of the role of material objects in our observations and interpretations of our case organisation. In our interpretation of the empirics we note the use of various proprietary documents and software tools [e.g., MS Excel templates used in Secondaries]. These material objects enable the direction and repetition of work practices and act as receptacles of practice memory.

From a theoretical perspective we believe that while Schatzki recognises the role of material artifacts, the role of such objects is relatively low key in his description of 'site' ontology when compared to other theorists such as Knorr Cetina (for e.g., 1997, 2001). Schatzki has chosen to recognise the role of objects in order to provide a comprehensive theoretical

[19] The New York Times 11/10/2012.

account of the social 'site' and he is careful to distinguish his theorisation from those that have been developed elsewhere (for e.g., in Actor Network Theory and interactionist accounts). While this is consistent with Schatzki's philosophical position it suggests that in his expositions of Practice Theory the role of artifacts and objects more generally is a relatively neglected aspect of the social milieu. This is an area that we believe could be developed in future research possibly by further developing Schatzki's constructs or by looking for a sensitive rapprochement with theorists of sociomateriality (Leonardi, 2011; Orlikowski, 2007).

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Appendices

Appendix 1: List of interviews conducted

Date	Interviewee	Code	Office
12th July 2011	Managing Director and Head of Investment Management Emerging Markets, Member of product committee	MD/1	EU/1
15th July 2011	Managing Director, Chief Financial Officer, and Chief Operating Officer	MD/2	EU/2
02nd Nov 2011	Director and Head of the Portfolio Servicing	Director/3	EU/2
14th Dec 2011	Vice President of the Portfolio Servicing	VP/4	EU/3
07th Feb 2012	Director of Investment Management, Member of VC investment committee, and member of European investment committee	Director/5	EU/3
10th Feb 2012	Associate, Investment Management	Associate/6	EU/3
21st Feb 2012	Managing Director and Head of Investment Management Europe	MD/7	EU/3
21st Feb 2012	Associate and Supervisor, Data Quality Management – Portfolio Servicing	Associate/8	EU/3
28th Feb 2012	Managing Director and Co-head of Secondaries team, Member of the US buyout committee and Secondaries committee	MD/9	USA/1
02nd Mar 2012	Vice President of Portfolio Servicing	VP/10	EU/3
06th Mar 2012	Vice President of Investment Management – Secondaries team	VP/11	EU/2
20th Mar 2012	Managing Director and Co-head of Co-investment	MD/12	EU/1
19th Apr 2012	Director of Investment Management, Member of VC investment committee, and member of European investment committee	Director/5	EU/3
26th Apr 2012	Vice President of Investment Management – Primaries team	VP/6	EU/3
04th May 2012	Associate, Investment management	Associate/13	EU/1
13th July 2012	Vice President of Investment Management – Secondaries team	VP/11	EU/2
13th Nov 2012	Managing Director and Head of Investment Management Europe	MD/7	EU/3

Appendix 2: Hierarchy within the investment management team at DG

Managing Director

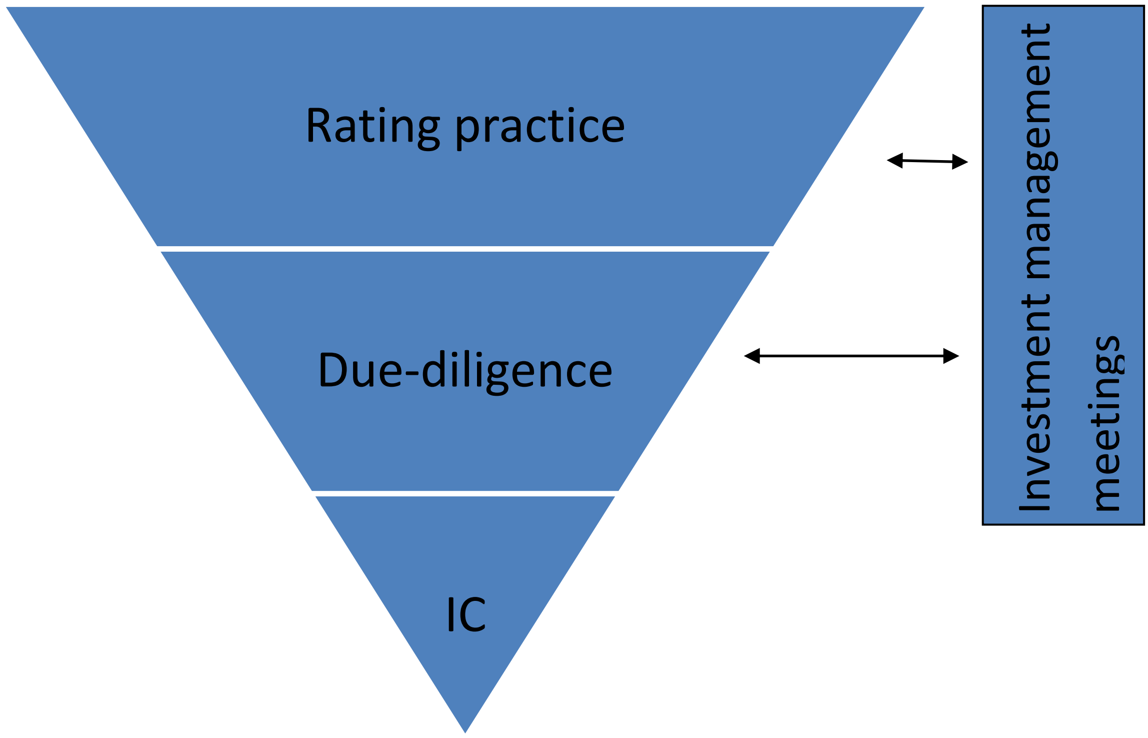
Director

Vice President

Associate

Analyst

Appendix 3: Investment evaluation practices at DG



IC: Investment Committee

The company receives over 400-500 investment proposals from various GPs every year, which go through the rating exercise. Of these, around 60-70 proposals go through a full due-diligence and the actual investments which the company makes [i.e., approved by the investment committee] are just 15-20 each year.

Appendix 4: First part of the IM template

1.1. Investment Summary

	Exceptional	Sound	Acceptable	Potentially weak
Manager				
Strategy				
Competitive advantage				
Track record				
Terms				
Corporate social responsibility				

1.2. Investment Merits and Concerns

1.3. Track record

Appendix 5: Illustration of DG's primaries and secondaries products