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Fast Fashion: Calculative Technologies and the Governance of Everyday Dress

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Abstract

The speed at which contemporary fashion changes is such that the life of a garment can now be measured in a matter of weeks rather than months. The organizational consequences of operating in this environment are that fashion retailers have been prompted to adopt a range of quick response (QR) initiatives. QR involves responding promptly to the information contained within emerging sales trends whilst simultaneously accelerating the movement of product from factory to shop shelf. Drawing on the case of a UK fashion chain, this paper explores accounting's role in enacting quick response. In addition, by deploying the theoretical framework of governmentality (Miller and Rose 1990; Rose and Miller 1992), the paper highlights the role of calculative technologies in the creation and sustenance of fast fashion and hence the governance of everyday dress.

Keywords: calculative technologies, fashion, governmentality, mediating instrument, quick response.

JEL descriptors: M41, M10, M30

1. Introduction

Fashion, in its myriad guises from shopping mall to mass media, has a pervasive presence in contemporary society. Its significance as a research site, both in terms of its scholarly credibility and its sheer scale within business more generally, has been well made (White and Griffiths, 2000). For decades though, the topic of fashion was ignored by accounting academics. Times, however, are changing and the phenomenon of dress which has been a

longstanding source of intrigue for social theorists and scholars of cultural identity alike has entered into the domain of accounting thought. Recognising the richness of engaging with this new arena, Sargiacomo (2008, 2009) and Jeacle and Carter (2012) have undertaken some early explorations into the role of accounting within the field of fashion. Sargiacomo's historical work on the Italian luxury clothes label Broni, has highlighted a range of isomorphic changes, including new accounting control systems, that transformed the company from a small craft based business to a global brand. By contrast, Jeacle and Carter (2012) examine the other end of the fashion spectrum, the price competitive environment of the contemporary fashion chain store, and suggest the mediating role of accounting in the conflict between creativity and cost control that is inherent in these type of organizational forms. The low price fashion store, and its production-supply chain, has also been a subject of a more recent study by Neu, Rahaman and Everett (2013). These authors show how the use of accounting practices, in the timely and cheap delivery of fashion garments, may inadvertently maintain sweatshop working conditions for factory workers at the extreme end of the apparel supply chain.

This paper seeks to further the research agenda of accounting and fashion by examining a particular feature of the fashion industry. The notion of 'fast fashion' like 'fast food' captures the essence of a phenomenon which witnesses the constant renewal and reinterpretation of styles such that the life of a fashion garment is typically limited to a matter of weeks. Indeed, speed is now a key driver in fashion retailing (Popp, 2000). Such a rapid turnover of fashion styles has its roots in the widespread growth of international fashion chain stores, from early entrants Benetton in the late 1960s to subsequent players H&M and Zara in the 1980s onwards. Given the scale of its operations, the fashion chain store, positioned at the cheaper end of the fashion spectrum, is particularly exposed to the vagaries of fast fashion. An

erroneous prediction regarding the latest fashion trend could, for example, lead to a glut of unsaleable product across the entire chain. Operating in an environment characterised by demand uncertainty and an ever present risk of rapid product obsolescence, the fashion chain's ability to detect and respond quickly to emerging fashion trends is therefore a key goal and has prompted the adoption of a panoply of 'lean retailing' practices (Abernathy, Dunlop, Hammond and Weil, 1999). The prominence of the Quick Response (QR) movement within the fashion industry is a prime example of the popularity of such practices. With the goal of shortening lead times and improving the flexibility of the supply chain, QR attempts to address the problem of fast fashion through the faster movement of product forward and customer information backward.

Drawing on case material from an established UK fashion chain, this paper explores the role of accounting in the enactment of quick response initiatives. It examines the role of calculative technologies in both enabling the bi-directional flows inherent in quick response, and mediating (Miller and O'Leary, 2007) between them. Not only should such investigations shed further light on accounting's operation within the world of fashion, but may also yield valuable insights into accounting's role in contemporary and fast moving organizations more generally. Indeed, the fashion chain is arguably an illustrative example of the type of organizational form to which Otley (1994: 298) refers in his call to broaden the framework of future management accounting research:

Ideally, initial work should take place in fast-moving companies operating in rapidly changing environments so as to provide illustrations of developing best practice at the leading edge of adaptive activity.

Perhaps more importantly, however, this paper seeks to provide a space in which accounting can connect with the broader movements within social science by engaging with what might be considered as the margins of accounting (Miller, 1998). Recent debate within accounting scholarship has suggested that accounting should actively attempt to drive the future research agendas of a wider community (Chapman, Cooper, and Miller, 2009). In other words, rather than passively adopting research trends from other disciplines, accounting should set and inspire research directions beyond its own domain. One means of achieving this goal is by illustrating the role of accounting, or calculative technologies more generally, in everyday life and culture (Hopwood, 1994; Jeacle 2012). By examining fashion, a feature of everyday consumer culture, prior accounting studies (Sargiacomo, 2008, 2009; Jeacle and Carter, 2012; Neu, Rahaman and Everett, 2013) have contributed to this burgeoning research agenda. In this manner, alternative accounts of fashion emerge which supplement the long standing contributions within sociology and cultural studies. Hence, in addition to its conception as a form of identity construction (Wilson, 1985), leisure activity (Langman, 1992), and cultural signifier (Barthes, 1985), the phenomenon of fashion can also be informed by the thoughts of accounting scholars. The current paper seeks to further the contribution of accounting scholarship by focusing on the speed of the fashion industry, a distinctive aspect of contemporary fashion chains. An appreciation of the fast nature of fashion facilitates new insights into the role of accounting within the domain of fashion and is, of course, essential to understanding the social and organizational context in which accounting operates (Hopwood, 1983).

The paper employs the theoretical framework of governmentality as proposed by Miller and Rose. Drawing on their seminal works (Miller and Rose, 1990; Rose and Miller, 1992), the paper views accounting as a calculative technology for governing individuals and

populations. Using such a theoretical lens facilitates a broader understanding of accounting beyond its role within the confines of the organization (McKinlay et al, 2010). Consistent with the arguments advanced by Hopwood (1983) and Burchell et al (1980), governmentality rejects the view that accounting is merely a narrow technical practice, but rather recognises its contribution to “a more general project of socio-political management” (Miller and O’Leary, 1987: 262). By unravelling the links between the micro processes of accounting and the macro programmes of government, the governmentality thesis suggests that calculative practices can shape everyday life in a variety of domains, particularly those previously regarded as private in nature. In this particular case, the role of calculative practices in the creation and sustenance of fast fashion is examined. Consequently, this paper uses insights from the governmentality literature to tease out the linkages between such calculative regimes and the construction of a particular way of conceptualising fashion and how to operationalise it. For example, to what extent are the accounting practices deployed by these retail fashion giants part of an infrastructure which defines the parameters within which the world dresses. How do the purveyors of garments articulate what is fashion and what is not, and how might calculative practices be enrolled in this process? The use of the governmentality framework in this context of a particular firm is relatively novel as past governmentality research has tended to work at the broader macro-level (Kurunmäki and Miller, 2011). This paper seeks to act as a platform for illustrating this wider application of the theory, and in particular for highlighting the role of accounting technologies in the governance of dress.

The paper is structured as follows. Section two outlines the governmentality framework, and considers the role of calculative practices as technologies of government. In order to set the context for the paper’s subsequent discussion, the next section provides an overview of what fast fashion entails, and explains the dilemma of achieving a quick response to such fashion

trends. The case organization is introduced in section four: Trendy Fashions is an established UK fashion retail chain. Drawing on interview data with key actors within this organization, this section attempts to capture the role of accounting in facilitating quick response within the chain. The next section discusses these findings through the lens of governmentality and considers their implications for our understanding of the role of calculative practices in the shaping of everyday life. The final section contains some concluding thoughts.

2. Governmentality and the Role of Calculative Technologies

Miller and Rose's scholarship has inspired a host of governmentality studies across the social sciences¹. Essentially, Miller and Rose created a new way of conceiving and understanding power. In particular, they sought to provide an account of how political power operates in contemporary liberal democracies. Inspired by Foucault's (1991) musings on the theme, their conception of power centres on the manner in which authorities of various kinds seek to regulate the lives of individuals indirectly, through a vast apparatus that produces the calculable and knowable citizen. This represents a distinct departure from traditional modes of sovereign power which typically were limited to the taking of life rather than the 'optimising' of life (Foucault, 1980). To comprehend power today, we need to move "beyond the state" (Rose and Miller, 1992) and to explore the indirect means by which the behaviour and actions of individuals who are free to choose come to be shaped and governed.

As a first step to elucidating this form of regulation, Miller and Rose conceive governing to be a *problematizing activity*. In other words, for governing to occur there must first be a moral rationale or justification for intervention; there must be a problem to solve. Discourse is identified as playing a crucial role in the creation and sustenance of this problem which

seeks a cure; problems find a space within a “discursive field” (Miller and Rose, 1990: 5). As the problem becomes knowable and definable, it is shaped and translated into a distinct *programme of government*. The previous rumblings and ruminations are articulated into a more concrete form of goals and objectives. “To have problematized a particular activity or technique is part and parcel of that process of articulating a new set of proposals that promise to remedy the deficiencies of existing ways of managing and calculating.” (Miller and Rose, 1993: 189).

To make programmes operable, however, *technologies of government* need to be deployed, those “calculations, techniques, apparatuses, documents and procedures through which authorities seek to embody and give effect to governmental ambitions.” (Rose and Miller, 1992: 175). It is at this juncture that accounting comes to play a crucial role, for accounting and other calculative practices constitute prime examples of such technologies of government (Miller, 2001). Accounting acts as a key mechanism through which macro programmes of government become articulated at the micro level. Accounting can be used “to translate abstract policies into practice” (Neu and Heincke, 2004: 182) and equally “to translate questions of calculative practice into questions about the maintenance of social order” (Vollmer, 2003: 373). Miller and O’Leary’s (1987) study of standard costing in the US during the early decades of the twentieth century illustrates this process. Through the creation of costing norms and standards at the local level of the firm, notions of the inefficient and efficient worker were enabled which paralleled the broader debates on productivity which so occupied a range of actors and agencies at that time. In this manner, and through a myriad of other interventions, the “self regulating calculating person” was constructed (Miller, 2001: 381). Therein lies the power of accounting, in shaping the actions of individuals albeit in a

¹ Such has been the extent of their significance, that their 1992 publication (Rose and Miller, 1992) in the *British*

way that is self disciplining in nature. Consequently, accounting and calculative practices more generally come to act “as a key resource for a certain ‘liberal’ form of government” (Miller, 2001: 381). This situates accounting “as an important part of a network of power relations which are built into the very fabric of organisational and social life” (Miller and O’Leary, 1997: 240).

Indeed, the notion of a network of forces is crucial to understanding the process of governing so conceived. To this end, Miller and Rose draw upon Latour (1986, 1987) and Callon’s (1986) work on the theory of translation. The insights of these latter scholars provide the conceptual tools to explain how a network of relations is established between a diverse array of actors. Such a network mobilises the interests of each constituent member such that the goals of each become aligned. “Relations are established between the nature, character and causes of problems facing various individuals and groups ... such that the problems of one and those of another seem intrinsically linked in their basis and their solution.” (Rose and Miller, 1992: 184). Once a sufficient alignment has been achieved among various parties, an assemblage forms which in turn provides the conditions of possibilities for *government at a distance*. Accounting and related calculative practices enable this process in so far as they make spaces, including geographically distant spaces, calculable (Miller and Rose, 1994; Miller and Napier, 1993). As Neu (2000a: 270) remarks, “like a geographical map, accounting calculations construct a certain image of distant domains thereby framing possible interventions.” Accounting acts as a Latourian inscription device in this regard (Robson, 1992) rendering reality mobile, comparable and combinable. This facilitates the formation of *centres of calculation* (Rose and Miller, 1992: 185) such that remote realms are made knowable and malleable. Accounting’s ability to reduce complex issues to the “elegance of

Journal of Sociology has been recognised as one of the twelve most influential works in the field of sociology in

the single figure” (Miller, 2001: 382) no doubt assists the task of such surveillance. In this manner then, “authorities can act upon, and enrol those distant from them in space and time in the pursuit of social, political or economic objectives” (Rose and Miller, 1992: 187). All the while, however, and this is a fundamental element of governmentality, the premise of an individual free to choose, indeed obliged to choose, is preserved.

One of the ways in which such ‘governed freedom’ (Rose, 1999) is achieved, and indeed an important ingredient to the successful outcome of government, is the underlying role of the expert throughout the whole process. The expert can construct *enclosures* (Rose and Miller, 1992: 188) around a body of knowledge and in so doing consolidate their position as specialists in that field, as purveyors of a “disinterested truth” (Miller and Rose, 1990: 10). Accountants are one obvious example in this regard. Experts by their nature enable reform; they present ‘solutions’ to ‘problems’. As arbitrators of opinion, they enter into a “kind of double alliance” (Rose and Miller, 1992: 188) between the state on one hand and the private individual on the other. In this manner, the expert plays a fundamental mediating role that links the socio-political objectives of government with the actions of free thinking citizens. Together with a range of devices for acting on the actions of others, expertise seeks to ensure that the private values of the self regulating actor become aligned with socially desirable goals.

As others have argued, the governmentality framework provides an insightful lens from which to interpret the management of populations in contemporary liberal democracies (Joyce, 2010). It helps to explain how a host of geographically distant and diverse actors can come to be acted upon without recourse to traditional modes of direct intervention; in other

the past 60 years (Heidensohn and Wright, 2010).

words, it explains the “self-government of individuals” (Miller and Rose, 1990: 28). In terms of accounting, this theoretical perspective emphasises the roles of calculative practices in the governing of everyday life. Such an understanding of accounting opens up a plethora of possibilities for the scope of accounting research. As Vollmer (2003: 373) has commented, it creates a “sociological suspense of calculation”, providing potential new realms of inquiry. It is therefore somewhat surprising that there has not been more work within the accounting domain which draws on the governmentality framework, notwithstanding the popularity of Foucauldian thinking more generally within accounting research. Foucault’s concept of disciplinary power has enjoyed considerable support over the last twenty-five years, in particular within the field of accounting history. Yet, surprisingly, Foucault’s deliberations upon government, which underpin Miller and Rose’s framework, have not been so generally adopted. There have of course been references to the notion of governing and the surveillance potential of the accounting apparatus to act at a distance. However, there have been relatively few studies which deploy the governmentality framework within the accounting context, in other words, which link the micro techniques of accounting to the broader economic and social programmes of government as illustrated in Miller and O’Leary’s (1987) study of scientific management².

This paper seeks to contribute to this still emerging literature, and to deploy Miller and Rose’s governmentality lens, not only to explore the role of accounting as a technology of government within the fashion industry, but also to suggest ways in which such calculative practices are linked to the governing of everyday dress. The deployment of the theory in this

² Important early exceptions have included Preston, Chua and Neu’s (1997) examination of accounting’s role within US healthcare initiatives and Neu’s (2000b) study of the process of colonisation of Canada; the latter work arguing that when viewed as a technology of government, accounting facilitated the translation of colonial objectives into a practical reality. More recently, Graham (2010) has provided an assessment of the effectiveness of accounting as a technology of government within the Canadian retirement income system, while Rahaman,

manner is relatively novel in that many governmentality studies focus on the more ‘macro’ level interventions, rather than examining attempts to govern at the level of an industry or individual. This is unsurprising given the focus of Foucault’s own lectures on the theme (Gordon, 1991). However, Foucault’s definition of government was founded on a much broader premise, encompassing both private and local interpersonal relations in addition to more macro level concerns regarding populations. As Miller and Rose (2008: 20) argue:

... we have found the insistence on analysing power and politics without necessary recourse to the state as locus, origin or outcome to be incredibly fruitful. This is not because states and the political apparatus are unimportant – that would be to misunderstand our argument. Rather, we argue that analyses should start from elsewhere, from the practices of governing themselves. These might be forms of calculation, ways of categorizing persons, rearrangements of factory layouts, treatments for various disorders, the testing of various groups or populations, and so on. In this way, as has now been shown, one might be able to start to map out the multiple centres of calculation and authority that traverse and link up personal, social and economic life. And it might even allow us to understand that ‘non-state’ modes of exercise of power are one of the defining features of our present.

Engagement with such varying sites for the exercise of power has already been successfully attempted in recent accounting research³. This paper similarly seeks to illustrate

Neu and Everett (2010) have deployed the governmentality framework to investigate the important role of accounting practice in fighting AIDs in Africa.

³ For example, Brivot and Gendron’s (2011: 141) examination of the surveillance potential of a computerised management system within a Parisian tax/law firm recognises the “ascendency of a variety of governing mechanisms” while Spence and Rinaldi’s (2013) investigation of the introduction of sustainability accounting reveals the enactment of governing within the context of a supermarket supply chain.

governmentality's broader reach in explaining the many and varied modes of governing and regulating individual lives in contemporary society.

3. Solving the 'Problem' of Fast Fashion: the Programmatic of Quick Response

The phenomenon of fast fashion is a significant issue for accounting researchers, and one that can usefully be analysed from a governmentality perspective. Fashion retailers have met the challenges it poses with a myriad of initiatives cumulatively referred to as quick response (QR). QR became a popular slogan in the US clothing industry in the mid 1980s. Faced with rising labour costs and stiff competition from imports, the Crafted with Pride in USA Council engaged management consultants Kurt Salmon Associates to identify possible solutions to the crisis (Davis Burns and Bryant, 1997). Their analysis revealed an average time period of 66 weeks to convert raw material to finished garment on the retail shelf, giving rise to an estimated \$25 billion in terms of inventory holding costs and garment markdowns (selling price reductions) (Blackburn, 1991)⁴. The QR movement in all its forms was born in an attempt to redress this situation.

One of the core tenets of the QR programme is to speed up the movement of products flowing forward through the supply chain (Perry, Sohal and Rumpf, 1999: 120). Reduction of response time is therefore at the heart of QR (Leung and Yeung, 1995). Such a temporal based approach embraces the vagaries of the fashion world, and recognises the reduction in risk associated with a shorter response time (Rosenau and Wilson, 2001). QR offers fashion retailers an appealing competitive advantage: short lead times generate the possibility of identifying and stocking the very latest fashion trends ahead of other stores (Jackson and Shaw, 2001). Consequently, reducing lead times has become a key strategic objective for

fashion retailers. For example, the popular UK fashion chain, Topshop, operates to an average of six weeks⁵ whilst the Swedish fashion giant H&M can turn an idea into a finished garment in a couple of weeks.⁶ Consequently, the traditional twice yearly collections (Spring/Summer and Autumn/Winter) which previously characterised the fashion industry are replaced by multiple ‘seasons’, reflecting both changing modes of supply-driven fashions, and the parallel heightened demands of the fickle high street shopper (Forza and Vinelli, 1996).

In so far as modes of governing are made operable through technologies of government, the QR movement has initiated an array of such technologies in an attempt to solve the problem of fast fashion. For example, Computer Assisted Design (CAD) systems facilitate a quicker approach to the creation of the initial design (Abernathy et al, 1999) while Computer Integrated Manufacturing (CIM) quickly links the design software with computer programs for pattern making, marker making (marking pattern on the fabric), sizing and cutting (Davis Burns and Bryant, 1997). On the factory floor, there has been a shift away from the long production runs traditionally employed in the fashion industry, to the manufacture of smaller batches in a wider product range (Blackburn, 1991). Such a flexible approach to manufacturing is particularly important given the ever constant quest for variety that defines fashion retailing (Jones, 2002: 161). A good example of flexibility on the factory floor is provided by the international fashion chain Benetton whose manufacturing process was redesigned so that the fabric dyeing process occurred only when the season’s fashionable colours had been determined (Harland et al, 1999).

⁴ By contrast, fast fashion firms such as H&M pride themselves in their low inventory holdings and short lead times - <http://about.hm.com/en/About/facts-about-hm/idea-to-store/production-process.html>, consulted April 2014.

⁵ Interview in The Money Programme, ‘Store Wars: Fast Fashion’, BBC2, 19th February 2003.

⁶http://about.hm.com/gb/abouthm/factsaboutm/fromideatostore/buyingproduction_fromideatostorebuyingproduction.nhtml, consulted November 2011.

Flexibility has become as important a factor as price in purchasing negotiations between manufacturer and retailer (Hunter and Valentino, 1995). In particular, the importance of flexibility is coming increasingly to bear on the physical proximity of manufacturing facilities to retailer outlets. Fashion retailers are notorious for the sourcing of garments from developing countries reliant on lowly paid labour (Phizacklea, 1990). However, in the quest for quicker response times, there has been a growing recognition of the potentially hidden costs, in terms of long lead times and inventory holding costs, of these traditional sourcing decisions (Hines, 2000). Perhaps the ultimate example of the importance of physical proximity to attaining maximum flexibility is the case of the Spanish fashion chain Zara. Zara's own locally situated production facilities enable an integrated design and manufacturing business model which allows Zara to respond to a new fashion trend in the market within weeks. Together with a twice weekly store delivery system, the result of these initiatives is that a low percent of inventory is sold at a markdown price. The chain's innovative practices have been the subject of interest to a host of global business publications and the focus of case studies produced by both INSEAD and Harvard Business School.⁷

In addition to focusing on the faster movement of product *forward* through the supply chain, QR is also concerned with speed and quality of feedback of consumer preferences *back* along the chain (Blackburn, 1991). As Christopher (1992: 167) remarks: "QR is obviously a classic case of the substitution of information for inventory". For example, information from customer preferences may lead to production being halted on slow moving garments and increased on those items which have become the month's 'hottest trend'. As a way of linking the bi-directional and frequently shifting notion of consumer preferences, QR technologies of government have been established to enable such information flows. Once again,

⁷ See for example: *Business Week*, May 29, 2000, p.98; *Fortune*, September 4, 2000, p.80; *The Economist* (US),

developments in information technology, in this case Point of Sale (POS) laser scanning, garment bar coding and Electronic Data Interchange (EDI) have facilitated this process (Christopher, 1992). For example, each garment, known in the industry as a stock keeping unit (SKU), is accounted for by means of a barcode (Davis Burns and Bryant, 1997). This code confers an instant visibility on all sales and inventory movements: “an item can be tracked at the SKU level at every point in the chain from raw material to customer” (Blackburn, 1991: 255). The outcome of this process is an instantaneous transfer of detailed sales and inventory data back through the supply chain to garment and textile manufacturers (Blackburn, 1991) whose flexible production system allows rapid switching of resources in favour of the fastest selling lines (Jackson and Shaw, 2001; Kunz, 1998).

The establishment of supply chain partnerships/alliances is identified as a prerequisite to achieving successful feedback (Davis Burns and Bryant, 1997; Hunter, 1990) with retailers increasingly insisting upon the adoption of EDI systems by supply partners (Riddle, Bradford, Thomas and Kincade, 1999). The fashion retailer is typically the larger and more dominant partner in such alliances (Hunter and Valentino, 1995) and may establish strong working relationships with a small number of key suppliers (Bickerton, 1999; Hasty and Reardon, 1997). One competitive advantage arising from such a scenario is the negotiation of exclusive rights to a product range with a supply partner (Markham, 1998), or an agreement regarding an advertising and markdown allowance (Cash, Wingate, and Friedlander, 1995).

To conclude this section, recent years have witnessed significant changes within the fashion industry. The speed and frequency at which the fashion cycle now turns has prompted retailers to deploy a panoply of QR techniques in order to solve the ‘problem’ of fast fashion.

May 19,2001, p.2; *Forbes*, May 28, 2001, p.98; Insead Case 602-010-1, 2002 and Harvard Business School

The following section introduces the paper's case organization, investigates the QR initiatives adopted by this particular fashion chain, and the role of calculative practices therein.

4. A Fast Fashion Case Study: Trendy Fashions

4.1. Methodological considerations

The paper adopts a case study approach (Scapens, 1990; Yin, 1994). The case organization Trendy Fashions⁸ is a fashion chain which was founded in the UK in the 1990s. Since then the chain has grown to encompass almost 500 stores across 25 countries. The chain primarily targets female customers in their twenties and positions itself as a boutique style chain within the market.

The form of data collection used within this case study is the interview. Prior to entering the organization, a list of the key functions in which interviewees were sought was drawn up and provided to the management of Trendy Fashions. Research interviews were conducted with ten experienced personnel (see Table 1) who held senior positions within their respective domains, each domain representing a core aspect of fashion chain retailing. Interviews were conducted over three day visits to the chain's London headquarters and Oxford Distribution Centre (DC).

Insert Table 1

Case 9-703-497, 2003.

⁸ Trendy Fashions is a fictitious name.

All interviewees were posed general questions with regard to their job experience, their day to day tasks, and the extent to which accounting information was useful to them in conducting such tasks. Interviewees were also posed more specific questions regarding the issue of quick response within fashion retailing, the organizational tensions it creates, and the role of accounting in responding to the demands of a fast fashion environment. Interviews were semi-structured in nature (Kvale 1997) which resulted in a flexible, and even on occasion, meandering path of data collection. It is important to note though, that a flexible interview style does not release the researcher from the need to be orderly and systematic in approach, both during and after the process. To this end, the line of interviewing within this case study was based on a continuous evaluation of responses and a consequent decision process to either continue with a particular line of inquiry or not. Interviews lasted between forty to sixty minutes in length, were tape recorded, and subsequently transcribed to ensure the accuracy of the interview material captured.

Before outlining the subsequent analysis of interview data, it is useful to deal at this point with the issue of theoretical saturation. In non-qualitative research, theoretical saturation is viewed as essential to the research process. It is seen as a guide to the robustness and exhaustiveness of the research undertaken (Lincoln and Guba, 1985). In qualitative research, saturation is similarly viewed as a cornerstone of excellence, but there are no pre-determined tests or guidelines as to what constitutes saturation point (Morse, 1995). As Bowen (2008, p.139) remarks, “the saturation concept remains nebulous and the process lacks systemization”. However, there is agreement that the broad thrust of theoretical saturation, as outlined in Glaser and Strauss’s (1967) classic text on grounded theory, is the point at which very little new information is generated by fresh research interviews. In other words, saturation point is that point at which “no new properties and dimensions emerged from the

data, and the analysis had accounted for much of the possible variability” (Strauss and Corbin, 1998, p. 158). In this case study of Trendy Fashions, saturation point was achieved at the end of the interview process. By this stage, data replication had commenced such that no new insights were being gleaned. Hence the conditions for theoretical saturation had been reached (Marshall, 1996, p.523).

Analysis of the transcript data revealed a number of themes which informed the researcher’s extant understanding of fashion store retailing and the speed at which it operates. The researcher identified a number of illustrative examples of quick response from the interview data which highlighted the two directional flows of product and information. These examples form the basis of the empirical content of this paper. The researcher then verified the accuracy of their findings by way of a report to the group’s Finance Director.

Finally, throughout this data gathering process, and in particular on reviewing the first draft of the case study empirics, the author began the process of conceptualising the theoretical framework for the paper. As Ahrens and Chapman (2006: 820) observe: “Doing qualitative field studies is not simply empirical but a profoundly theoretical activity”. Theoretical crafting is an iterative process and evolves over time from a careful consideration of the field material rather than from the imposition of a pre-determined construct (Ahrens and Dent, 1998). There is no “logical linear process” (Leavy, 1994: 115) but rather a continuous interweaving of data, literature, and theory. Qualitative research, by nature, develops in a manner such that social context, rather than preformulation, drives research (Covaleski and Dirsmith, 1990). Flexibility is consequently a “hallmark” (Burgess, 1991: 143) of the researcher in the field. An openness to the surprises which may present themselves during the course of research, and a willingness to learn from such observations rather than imposing “a

preconceived and immutable framework on them” (Ferreira and Merchant, 1992: 5), helps ensure a richer and more credible final result.

4.2 Trendy Fashions and the ‘Problem’ of Fast Fashion

As discussed in the previous section, frequent and rapid change is an inherent aspect of contemporary fashion. A common scenario is that a popular celebrity steps out in a particular outfit and such is the power of the global media that that image is transported around the world and the latest fashion trend takes shape. The corollary of this phenomenon is that fashion businesses require a high degree of organizational responsiveness. If a retailer misses a key fashion trend, those sales are lost to competing stores. Worse still, if the retailer responds to the trend, but is not quick enough in that response, not only have they lost sales to competitors but they are also left with unwanted product. This is the nature of the fast fashion ‘problem’, and interviews with personnel within Trendy Fashions revealed the practical realities of working in such a dynamic environment. For example, Jan (Distribution Controller) explains:

... suddenly you get a couple of film actresses on the red carpet [wearing a new trend]
... There is a very, very small window of time that you can get on the back of that [trend]. And if you miss it, or you can’t do it, you don’t bother. It will just all end up in the sale. Don’t be in fashion retailing unless you’re prepared to change every day.

As a designated “quick response brand” (interview with Fay, Head of Production) Trendy Fashions operates on the basis that a garment’s life is 6-8 weeks (interview with Terri, Head of Merchandising). Consequently, responding quickly, both in terms of moving product

forward faster and in feeding customer preferences *backward*, is an organisational priority for the chain. The following two sections outline the QR initiatives that Trendy Fashions deploys with respect to each of these directional flows and consider the role of calculative technologies in facilitating such responses.

4.3 Quick Response and the Movement of Product Forward

As discussed in section three of the paper, a key feature of successful quick response within fashion is the fostering of relationships between the fashion retailer and the manufacturer/supplier further back along the supply chain. Trendy Fashions has a broad supply base, but particularly strong relationships have been developed with the Asian market (the chain has an office in Hong Kong to facilitate sourcing from this region) and with Turkey. Discussions with one of Trendy Fashion's head buyers, indicates the importance that is given to nurturing such supply relationships. For instance, with regard to a Turkish supplier, she remarks:

That's quite a mature relationship that we've had with the supplier. We've got a lot of loyalty there, a lot of trust there, a lot of communication that goes there that's been built up over the last 5 years. They are a key supplier to us.

Proximity to a supplier can obviously play a central role in achieving fast response times. For that reason, Trendy Fashions sources from Eastern European countries when it needs to respond quickly to market trends. The downside of sourcing more locally however, is the cost: Asian manufactures can offer more competitive margins. This delicate balancing act is a dilemma which Trendy Fashions' buyers must face on a continual basis:

I buy from Pakistan which has got a long lead time but then I also buy from Turkey which allows me quick response The buyer then has to manage her supply base to make sure she's got every pot covered because different countries offer different things, different lead times etc. For instance, for the Pakistan route I know I need to plan well in advance for that. It can be a threat but then by doing that we get a better margin. So it's balancing the supply base overall. The Turkish route allows me to be more flexible, it allows me to trade [purchase more or less] as well. (Rachel, casual wear buyer).

The changing political landscape of Europe has impacted upon these decisions. While on the one hand, entry to the European Union, and quicker customs clearance, has further speeded up the response time of Eastern European suppliers, on the other hand, increasing levels of bureaucracy have made them a more costly option:

The great thing with for example, Romania joining the EU, is that transport is a bit quicker, customs is a bit quicker. However, it's become more expensive... because there are more procedures and guidelines the factory owners have to take before they are part of the EU. Hence why we have been sourcing in Morocco. (Fay, Head of Production).

Consequently, the conflict between shorter lead times versus higher product cost is an issue which the buyer must face each time a sourcing decision is made. Transport costs can constitute a significant component of the final product cost and therefore often plays a central role in such decisions. For example, a product sourced from an Asian supplier may appear inexpensive until the transport cost is added on. In reaching a final sourcing decision, the buyer is aided by the chain's Import Team which is based in the Oxford Distribution Centre. This team provide buyers with an important support service: that of estimating transport costs

in advance on all international purchases. The team has accumulated data on the transport costs associated with every import that the chain has made in the past. They then use this database to estimate the transport cost of any future import. Jan (Distribution Controller) explains the process as follows:

... we have a bespoke database system, which all details of every consignment are on there, the cost of freight, duty, vat, whatever. From that system I pull off information which allows us to set what we call trends. So taking all the actual costs and looking at averages, we set [a trend] for the buyers so that someone in Trendy Fashions who is looking at buying a dress or something, 5,000 pieces say, the plan is to come out of Hong Kong on a ship in March. They will add, what we call the trend uplift, which is say 14 percent, to cover all that transit.

Essentially, in the 'trend-uplifts' the Import Team have constructed standard costs for the transport element of a garment purchase. In addition to constructing these general indications of cost, the Import Team also offer a bespoke service to cost a specific consignment. This exercise is referred to as 'pre-costing'. Pre-costing is an important activity as the transport cost may substantially change the expected margin on a product, leaving the buyer with a nasty surprise when the final bill arrives. Jan (Distribution Controller) explains:

So they [buyers] will contact Tom here [member of Import Team], hopefully early on and they will ask him to pre-cost. So they will fill out a pre-costing template where they say, I'm thinking of buying this, approx 5000, this is my target cost price, coming out in September by sea, but can you also give me an air price. They also have to get estimated packaging specs from the supplier. Then Tom will work out a bespoke

costing, a percent, for that item and it may be that because it's bulky ... that buyer needs to allow for maybe 25 percent. So if they haven't made that call then they could end up bringing it right in and that fat margin that they think they are going to make, they may not make in reality.

The pre-costing exercise is very detailed. As noted in the above quote, the Import Team will request the packaging specifications for the product. The type of packaging used can significantly impact the quantity of overall consignments required. Packaging can be a particularly important consideration for accessories such as shoes and handbags. From experience, the Import Team will be aware of the potential cost savings to be made from relatively minor modifications in packaging materials. Consequently, not only does this team provide buyers with transport cost estimates, it also provides advice on how to possibly manage that delivery in the most cost effective manner. Jan (Distribution Controller) talked us through a pre-costing sheet for shoes on which the team were currently working:

These figures there are based on only eight pairs and what he [Tom, Import team] will have said to them [buyer]: "Normally we'll get x amount of pairs [in a carton]". So he'll challenge them in the nicest possible way and say: "If you were to get 12 pairs in the carton that uplift would go down by x". So the buyer will go back to the supplier and say: "Why are you only getting eight in?" And it may be that a supplier is using cartons that happen to be that size, as simple as that, where somebody's making a decision without realising the impact further up. Or if say these were bags, it may be that the way they are packing them, there's a huge amount of stuffing say inside the bag which doesn't need to be there.

As the above quote indicates, due to the often bulky nature of shoes and bags, all accessories must be pre-costed with the Import Team before purchasing. Garments however, are not subject to this sanction, although buyers are encouraged to ‘pre-cost’, especially for products from a new supplier. Sometimes however, the excitement over a new product’s features can momentarily cloud a buyer’s commercial sense and the impulse to buy this fabulously fashionable garment takes precedence over the more mundane issue of freight and transport. For example, Jan (Distribution Controller) recalls one incident when a buyer failed to do the required pre-costing on a handbag order and “brought in a load of luggage by air freight and the cost of the whole consignment was just under £60,000 and it cost them just over that to get it here.” The fact that general standard costs, or ‘trend up-lifts’ exist for all garment purchases however, helps to offset the risk of disaster even if a buyer forgets to request a bespoke pre-cost for a particular accessory purchase. As Jan (Distribution Controller) observes:

The teams up there [London based designers and buyers] are highly creative, focused on design, on buying, on product, on colour, all the exciting things. To be honest, if they forget to pre-cost, if bells don’t ring, it’s because the actual freight, that sort of boring side of things, doesn’t enter their head. So the trends protect that, because you’re never going to get it [100 percent] right. As long as the bulk of what’s coming through [is reasonably estimated].

In summary, quick response in fashion requires proximity to suppliers, but that advantage must be weighed up against the larger margins on offer from cheaper but more remote manufacturers. In making these sourcing decisions, transport costs can prove pivotal. Here, the constructing of standard transport costs provides a greater clarity to the cost repercussions

of choosing one location over another, and acts as an internal control within the firm and between the designers and buyers and those charged with cost control. Consequently, calculative practices are inherently tied up with the buyer's sourcing decision with regard to the movement of product forward.

A second way in which calculative technologies may facilitate the product forward component of quick response is in the area of logistics. Trendy Fashion's Distribution Centre in Oxford handles all the chain's distribution needs. It is at this location that the imports from international suppliers get sorted and sent out to each of the chain's stores. The speed at which this exchange takes place is clearly a priority for the business, as Greville, Trendy Fashion's logistics manager, explains:

When you buy a new design, the name of the game is to get it out. Get it manufactured, get it turned around, get it shipped across from where it comes from, get it into the distribution centre and get it out onto the shelves. Otherwise you can't sell it. Sell, sell, sell. And that's the correct philosophy. So for our allocation orders, 70 percent of the product that comes in for a new line will have gone within two to three days ... So you have to plonk it in a very, very fast optimum pick location. And then manage that space accordingly.

In addition to the goal of turning the product around quickly, the distribution team also need to ensure that they distribute the right quantity of the right product to the right store. In other words, effective distribution involves distributing product around the chain's network of retail stores in a manner which is consistent with each store's inventory requirements. In

achieving this end, the distribution team are aided by a team of allocators who are part of the chain's merchandising function at the London head office.

Trendy Fashions has a team of fifteen such allocators who comprise "the team of people that actually send the stock to the stores ... they are pressing the button and determining where the stock goes" (interview with Terri, head of merchandising). Initially the allocators allocate new inventory from the distribution centre to the stores on the basis of a pre-established ratio that the merchandisers have determined. This ratio in turn is based on the merchandiser's detailed knowledge of the trading patterns of each store. As Terri, head of merchandising, explains:

We have got 200 stores and we know who takes the most money, down to who takes the least. And that's a general pattern. We know how much stock they can hold, how much money they've taken, how quickly they can turn their stock over.

Following this initial allocation, the job of the allocators is to minutely monitor inventory movements in each of the chain's stores and then inform the distribution centre accordingly as to what inventory should be sent where.

And what the allocation team do, is that they wait for one week's worth of sales and react and send the replenishment of the stock back that's in the distribution centre to whoever sold it best ... So they have to be extremely commercial, extremely switched on to who is selling what, in what profile, looking at the individual profiles of store and actually determining on a daily basis where the stock goes. (Interview with Terri, head of merchandising).

Such replenishment decisions are a crucial component of achieving quick response. They ensure that stores are re-stocked in such a manner that they can quickly respond to any fast moving sales trends, and in so doing avoid stock-outs and lost sales opportunities. This task of allocation is intrinsically embedded in a set of calculative technologies. Allocators' decisions are based on a rigorous scrutiny of sales and inventory holdings for each product line within each retail store. As Terri explains:

If we buy 10,000 of a dress for example, it gets receipted in our warehouse. Once it's receipted in our warehouse, it's on the books. So on day one your stockholding is that, on day two you sell x , x is taken away from that, to leave you with y , and on top of that you've brought something else in. So we know at every single stage, every week what our stockholding is in every store in the business.

This knowledge of inventory holdings in turn prompts the allocator's replenishment decision, a decision that constantly balances the tension between ensuring that for each store "we don't have shed loads of stock, but actually that we don't run out" (Terri, merchandise manager). In this manner, accounting information, once again, is seen to facilitate the faster movement of product forward through the supply chain.

4.4 Quick Response and the Movement of Information Backward

In addition to speeding up the sourcing and distribution of the physical garment from manufacturer to retail store, quick response also entails reacting promptly to customer preferences as revealed by store sales. Such information may indicate a fast selling product line, in which case more stock may be quickly sourced from suppliers, and equally it may

indicate slow selling garments for which price markdown decisions need to be considered. In terms of the organizational arrangements that Trendy Fashions has in place in order to capture and then respond to such emerging sales trends, the first stage in the process is the actual gathering of sales data from the tills across the chain's network. As Terri, head of merchandising for Trendy Fashions explains:

[Information] comes through the stores, through the tills, so there's a bar code on every item, scan it, all collected somewhere in the IT world, and it sends it all back to me.

The level of detail inherent in this data facilitates an insight into the sales performance of each product line on each day at each store. Terri explains:

We know that [X store], if we want to be that boring and analyse it, that on Saturday [X store] sold ten of that dress. And we know that. So we can analyse it in any way we can.

A full and rigorous analysis of the data is consequently the next stage in the process of achieving quick response. To this end, every Monday morning the buyers and merchandisers for each fashion department (e.g. casual wear, knitwear, dresses) within Trendy Fashions hold a meeting at the London head office to review the previous week's sales for their respective department. These departmental meetings are then followed by a collective meeting later in the day to assess the overall performance of the Trendy Fashion brand. Terri, head of merchandising at Trendy Fashions, describes the process as follows:

We look at everything in detail weekly, on a Monday. Because on a Monday, you need to know what you sold well, what you haven't sold well, what your overall

stockholding is versus what you thought it was, what your sales were. And we do that at line level. It's done at department level first of all. So each buyer and merchandiser will have their own set of group meetings, eight o'clock on a Monday, and they will be going through their own department. Then what we do collectively, we have a meeting at 11.30 where we review what sold well for the business for that week.

The information revealed by this analysis of sales data then forms the basis for decisions with regard to the further purchase of product, its discontinuation, or price markdown. In other words, Trendy Fashions' buyers and merchandisers respond quickly to the unfolding performance picture by sourcing more of the fast selling garments to take advantage of demand and dumping the slow ones. They make such decisions jointly, bringing together their relative strengths, the buyer's fashion instinct with the merchandiser's analytical abilities with regard to inventory management. Terri (merchandiser) provides an insight into what happens when dealing with the scenario of a popular garment:

So there are always going to be lines like this that you think, don't have enough. So you have to trade back into this and that's where the buyer comes in. The merchandiser would say 'We are selling out, we don't have enough. How long do you think this line will last? We need another x thousand'.

Terri's reference to the chain's ability to "trade back" into a product is an indicator of their flexibility to respond to fashion trends. It appears, however, that such flexibility can, on occasion, be a "double edged sword" (Clive, head of design). In other words, responding too quickly to a new sales trend can be detrimental to the business. For instance, while it would seem the logical response for any retailer to buy more of a fast selling line, the potential

downside of this particular action is that fashion customers are continually looking for something new and fresh rather than what they have seen before. Therefore it may often be better for the retailer not to respond to the positive sales indicators, rather simply enjoy the margins on that batch of goods and try to recapture them again on a new product line. Terri explains the situation as follows:

I'll take Liverpool for example. We've got this particular dress and she [store manager] sold 100 last week which is phenomenal in January. But she gets regular customers coming in week after week ... The initial gut reaction is: "My god we want more". But actually do we? Because in 6 weeks time, when we can get it in, she [the customer] has moved onto another style. So it's making that judgement call, when it's right to do that and when it's not right to do that ... we have to be brave and walk away from things and think, right that was fantastic, but actually it's going to be replaced by something else that's equally as fantastic that she'll [the customer] want to buy so that she'll have two things in her wardrobe instead of thinking "Oh god, not that black and white again". So it's knowing when to do it and when not to do it, and I think a lot of retailers struggle with that actually. When something is so fantastic, it's hard to walk away, very hard.

Equally, it may be the wrong decision to trade out of a product line too quickly, at the very first sign of potentially bad sales results. Clive (head of design) for instance, recounted a scenario where it would have been better if the chain had "kept our nerve" regarding a product line which they traded out of prematurely. Of course, if a garment is consistently selling badly, the merchandiser and buyer may have no choice but to respond to this indicator and consider marking down its price. However, there are ways to pre-empt this possibility

which could involve, for example, undertaking a quick alteration on a garment to make it more saleable. Rachel, casual wear buyer, explains:

There's a lot of things that we do if we're feeling nervous. If a garment's been made, for example, I had a shirt dress made and the sales weren't looking great, I cut it to a shirt. Or jeans, I'll make it into shorts. You need to be quick to think ahead. Or make something sleeveless or do something to give it some new life. A buyer has to take risks coz it's on your head.

If the garment has yet to be made, and the fabric is still uncut, this provides the buyer with an even further degree of flexibility. For example, the manufacturer can be instructed to hold off on further production of a style that might ultimately end up as markdown product. As Fay, head of Production, explains:

So if for example, mini skirts are the new big craze and we got our sales reaction on the Monday and they say mini skirts have dropped off, we can phone that factory and say have you cut it yet, and they say no, and we say stop.

Indeed, it appears preferable to hold fabric idly in inventory rather than cut it into a style which will be unsaleable. Fay, head of Production, elaborates on this point:

If for example we have got a Christmas style that is going to be six weeks late. Christmas window is a very, very narrow window to sell that product. We own the fabric, we own the trims, so we can't cancel it completely. However, holding the cloth for a season, is cheaper than making them and then putting them all into mark down.

It is obviously useful for the business to have some record of the condition in which fabric exists. Within Trendy Fashions management reporting system, the buyer's weekly Delivery Schedule contains a flexibility column indicating whether fabric is in a cut or uncut state. This is an important flexibility indicator for the buyer who will monitor it closely and take swift action to halt a fabric cut if she detects any degree of risk within the market. Rachel (casualwear buyer) explains the process as follows:

We've got a Delivery Schedule where there is a column on there, that has a flexibility column, so it identifies if it is fabric or if it's cut. So I can do something about it as long as it's not cut. So week on, week out, we are checking those columns. I'll be out and about the shops, I'll be reading magazines, I'll be speaking to suppliers, what's going on, who's booking what, getting all that information. And if they're starting to get nervous about something, I need to make sure it's not been cut coz at that point I'd rather it's fabric in a factory than a garment.

In summary, the Trendy Fashions chain appears to have developed a high degree of organisational responsiveness to changes in fashion trends. It trades in and out of product lines based on the customer preferences revealed by a weekly analysis of sales data. Consequently, decisions with regard to the sourcing of more product, implementing a price markdown, altering a garment, or indeed, even halting the cut of fabric, are all intrinsically linked into the chain's quick response to customer information. In turn, this data is embedded within the calculative apparatus of the chain's sales and inventory reporting system. In this manner, accounting information contributes to facilitating the quicker movement of information back along the supply chain.

5. Discussion: Calculative Technologies and the Governance of Everyday Fashion

The case of Trendy Fashions provides an illustrative example of the ‘problem’ of fast fashion, the various quick response initiatives deployed to attempt to address it, and the roles of accounting in such processes. From the perspective of the governmentality framework, such devices can be viewed as technologies of government, the panoply of instruments which seeks to render quick response operable by linking more tightly the supply driven aspect of contemporary fashion with consumer preferences as evidenced through sales data.

Specifically, the case provides three insightful examples of working centres of calculation (Rose and Miller, 1992: 185). First, within the Oxford distribution centre, the Import Team forms a centre of calculation when constructing norms of cost behaviour for the transport of goods from an array of destinations. Referred to in-house as ‘trend-uplifts’, these standards effectively make calculable the decision to source product from one geographic location versus another. From a site in Oxford, therefore, distant domains are rendered knowable and hence actionable. Calculative technologies provide a means by which buyers can evaluate the benefits of time over space, and vice versa, and then make their sourcing decisions accordingly.

Second, another centre of calculation comes into being every Monday morning, when Trendy Fashions buyers and merchandisers meet to review the performance of each product line. From their head office in London, these actors deploy calculative technologies to discover the popularity or otherwise of any fashion item across the entirety of their far flung chain; the sales of one particular dress are rendered instantly knowable. On the basis of such calculable knowledge, interventions regarding the death or sustenance of fashion trends are made. As

Rose and Miller (1992: 185) observe, government “depends upon calculations in one place about how to affect things in another”.

Third and finally, an ongoing centre of calculation is evident in the work of the Allocation Team. A grouping within the merchandising function, these actors draw upon calculative technologies to continually monitor the inventory levels at each of the chain’s retail outlets. In this manner, the allocators can construct a knowable domain with regard to a distant outlet. Such a calculable space is the precondition to ensuring that imported goods are dispatched from the Oxford distribution centre to the right store at the right time. In summary, within these three centres, a sophisticated calculative infrastructure is assembled in which norms are constructed and records of surveillance maintained.

In each of these cases, the “elegance of the single figure” (Miller, 2001: 382), one of the defining features of calculative technologies of accounting is evident: the standard transport cost, the sales revenue, and the inventory holding. In turn, each of these seemingly objective numbers is endowed with a meaning and significance reflective of the “discursive nature of calculation” (Miller and Napier, 1993: 633). The percentage revealed by the transport cost ‘trend uplift’ informs the buyer’s decision with regard to sourcing from near or afar. The sales revenues for a garment allows merchandisers and buyers to assess whether to ‘trade in’ or ‘out’ of a particular product line, while the inventory holdings at retail store prompt allocators to make this a ‘fast pick’ item within the distribution centre. As Rose (1991: 673) observes, government depends “upon a population of actors who calculate and act upon an expertise of number”. Consequently, calculative terms are embedded with meaning for the organisational actors within Trendy Fashions, and that meaning is intricately linked with the faster flow of both product and information.

In addition to enabling the faster movement of both product forward and sales information backward, accounting technologies may also play a role in mediating between these bi-directional flows. A ‘mediating instrument’ is an instrument that can mediate in a fluid manner between different actors and diverse domains. Drawing on the case of the semiconductor industry, Miller and O’Leary (2007) suggest that a speculation regarding the future of semi-conductors made in the 1960s by Intel executive Graham Moore is an illustrative example of a mediating instrument as it underpinned subsequent initiatives which transformed the state of this industry. Moore’s speculations on technological developments, known as Moore’s Law, provided the legitimacy for financial investment into the industry such that further technological advancement was realised. As Miller and O’Leary (2007) argue, Moore’s Law created a mediating instrument that aligned capital investment projects with investment decisions, and that brought together technological and economic rationalities. While this case illustrates the process by which a mediating instrument “mediates between science and economy” (Miller et al, 2008: 961), the notion of a mediating instrument can be used more broadly to facilitate an understanding into the means by which any diverse domains can become aligned. Invoking Miller and O’Leary’s (2007) notion of a ‘mediating instrument’, the case of Trendy Fashions illustrates how accounting technologies mediate between the two domains of consumer preferences and supply driven imperatives. This mediation is quite aptly captured in the example, as noted in the previous section, of the Liverpool branch of Trendy Fashions which decides not to respond to a surge in demand for one particular fashion garment. Rather than pushing product forward in response to customer preferences, the chain decides to hold off and respond with something new and fresh. Consequently, calculative technologies do not simply prompt automatic responses in one direction or the other, but also facilitate a mediation between the two flows inherent in quick response.

However, there is also a broader agenda at play here. For governmentality depends not only on the machinations of calculative practices but also the links between those calculative technologies and a wider set of goals and aspirations. It is equally important therefore to consider carefully the consequences of these calculative technologies with regard to the programme of fast fashion. In other words, what role might such practices play in governing the very fabric of fashion itself. A particularly interesting angle to concentrate upon in this regard is the centre of calculation that constitutes the Monday meeting of buyers and merchandisers. As noted earlier, the performance of every product line within the chain is analysed at this weekly event. Calculative technologies facilitate a micro surveillance of trading results yielding the visibilities essential to intervention, as Miller (2001: 382) argues “what is counted usually counts.” On the basis of this calculative knowledge decisions are made regarding a garment’s organizational future. If a garment has sold well, Terri and her merchandising staff will generally direct buyers to order more of the product. Alternatively, if a garment has performed badly, Trendy Fashions’ merchandisers will usually initiate a price markdown or work with their respective buyers to modify the product to make it a more appealing prospect to customers (for example, converting jeans into denim shorts). Such interventions, however, can be interpreted as something more than merely responding quickly to the dictates of fashion; they can be construed as actively fabricating the very foundations of fashion. The decision to buy more of a product line saturates the chain’s retail outlets with that garment and hence confirms its status in the mind of the buying public as being ‘in fashion’. Conversely, the garment that is assigned to the mark down bin or that disappears from store shelves is doomed to a fashion death. In this manner, calculative technologies can be seen to play a central role in actually dictating what becomes defined as fashionable or not.

In addition, it is possible to suggest that the very nature of fast fashion is sustained by such interventions. The killing off of a fashion trend merely shortens the perceived life of a garment, while the rapid ‘trading in’ to a popular fashion trend only speeds up the response cycle even further. In other words, the technologies of quick response, of which the calculative practises of accounting are an important element, may simply exacerbate that problem which they seek to address.

A final step is necessary though to illustrate how in this particular case “calculative practices of accounting enable the government of individuals” (Miller, 2001: 393). As noted earlier, governing relies on the mobilisation of a Latourian network of interests. Such a network operates by enrolling the interests of a diverse field of actors into a common goal or objective. Within the fashion system, such a network is already firmly in place. A mass populace is devoted to the dictates of fashion. While each member may feel they express their individual style in a unique way, collectively they wish to be ‘à la mode’. Fashion is a classic example of an inherently normalizing and self regulating activity (Foucault, 1979). Gibbings and Taylor’s (2010) recent study of the fashion advice offered by a popular television show provides a particularly persuasive example of the internalizing capacity of fashion. By dictating what is ‘good’ and what is ‘deviant’ dressing, the show’s hosts encourage participants and viewers alike to become aligned in their fashion preferences.

In a similar vein, the fashion chain seeks to deploy this existing network of forces to its own end, by defining what is fashionable, hoping that the network will do the rest. It maps its geographic spread of retail outlets onto it such that what is deemed to be fashionable at the weekly Monday meetings at the London head office becomes accepted as fashion across the entire chain. In a curiously bi-directional process, private individuals become enrolled into

the fashion agenda of retail corporations, while at the same time aligning corporate goals and objectives with their own through a range of sales data.

As noted earlier, experts play a key role within this process. “By means of expertise, self regulatory techniques can be installed in citizens that will align their personal choices with the ends of government” (Rose and Miller, 1992: 188). Contemporary media is awash with such fashion gurus, the advice dispensed by televised fashion show hosts being one prominent example of the means by which experts invade daily life (Gibbings and Taylor, 2010). In the case of Trendy Fashions, buyers and merchandisers don the mantle of expertise, bringing their calculative knowledge of fashion trends to bear on both the buying public and their own fashion chain. In defining and sustaining what constitutes fashion, they enrol the self regulating consumer in her continuous quest to be ‘in fashion’. Equally, their expertise ensures that unpopular garments are quickly killed off in line with corporate goals to reduce price markdowns. This is the final step in the governing of everyday dress, linking the agendas of two such disparate groupings within liberal democracies, and “without necessary recourse to the state as locus, origin or outcome” (Miller and Rose, 2008: 20). Indeed, appreciating the “multiple centres of calculation and authority that traverse and link up personal, social and economic life” (ibid.) potentially provides the most persuasive illustration of the governmentality perspective. This case seeks to illuminate one such centre of authority in the management of individual lives. With recourse to an array of calculative technologies, the fashion chain becomes implicated in the governance of daily dressing rituals. As Rahaman, Neu and Everett (2010: 1098) have remarked, “accounting not only helps to align behaviours and coordinate action but also functions as a mode of discipline.” Indeed, fashion itself can be regarded as one of the most powerful and disciplinary forms of governance in contemporary life.

6. Concluding Remarks

This paper is concerned with the contemporary phenomenon of ‘fast fashion’. Such is the speed at which high street fashion moves that the shelf life of a fashion garment is invariably a short one. Therefore, a constant dilemma for the clothing industry is to hold sufficient inventory levels to meet the demand for the latest fashion fad whilst minimising the inevitable price markdowns on inventory holding left over once it has passed. QR initiatives attempt to negate this ‘problem’ and hence maintain some competitive advantage in the dynamic and rapidly changing environment which characterises the fashion industry. Viewed through the lens of the governmentality framework, such QR initiatives represent the technologies of government which enable the programmatic aspiration of QR to be made operable. The case of Trendy Fashions acts as a useful exemplar of accounting’s role as a technology within the quick response arsenal, whereby calculative practices are deployed to facilitate the faster movement of both product and information. In addition, the paper contends that accounting technologies act as mediating instruments (Miller and O’Leary, 2007) between these bi-directional flows of fast fashion. More importantly, however, through the forming of multiple centres of calculation, these technologies create a calculative knowledge of distant spaces. In the rendering knowable of one such arena, the conditions are created, not just to respond to fashion trends, but rather to actually create and sustain them. Such interventions are supported by a network of interests whereby personal fashion rituals become aligned with a broader retail agenda. In this manner, the micro machinations of accounting become linked with wider social influences; calculative technologies of accounting become influential in the governing of everyday dress. In suggesting this role for accounting, this paper seeks to emulate Miller and O’Leary’s (1987: 235) aspirations for “some elements of a theoretical understanding of accounting which would locate it in its interrelation with other projects for the social and organisational management of individual

lives". Consequently, this paper suggests a new way of approaching the concept of fashion, by viewing fashion as a process of governance, and calculative technologies as a central component within that process.

There is no reason to doubt that the pace of fashion will continue its inexorable advance. The future holds the possibility of mass customization of everyday clothing. Body imaging software in the retail outlet captures body dimensions which are automatically transferred to the factory floor, yielding the paradox of a custom made fashion chain garment (Davis Burns and Bryant, 1997). Collaborative initiatives in planning, forecasting and replenishment (CPFR) are the next frontier in the buyer-supplier interface (Cooper and Slagmulder, 1999; Rosenau and Wilson, 2001). It is likely that a complex web of calculative practices will play a fundamental role in this collaborative process.

The focus within this paper was confined to the retail end of the fashion supply chain, as illustrated through one particular firm. However, future researchers may find it fruitful to consider the role of accounting at the manufacturing end of operations. As noted earlier, manufacturing flexibility is a key requisite of quick response. Flexible manufacturing in turn has repercussions for the organization's performance measurement system (Abernethy and Lillis, 1995). Consequently, an interesting avenue for further research is the impact of flexibility on the design of the fashion manufacturer's management control system. Equally, by opening up the field of inquiry to the entire length of the fashion supply chain, the dynamics of the manufacturer-retailer relationship can be explored. Lean supply chains generally exhibit high levels of interdependence between constitutive members (Hakansson and Lind, 2004; Kajuter, 2003) which requires the establishment of appropriate controls for the coordination of activities between partners (Gulati and Singh, 1998). It is within this

context that accounting may play a valuable role in the creation of visibilities for the coordination of tasks across organizational boundaries. The study of interorganizational relations is already a burgeoning field of research within the accounting literature. Shank and Govindarajan (1992) were early and prominent disciples of the value chain perspective in management accounting. Other accounting scholars subsequently followed Hopwood (1996) in observing the potential of “looking across rather than looking up and down” organizational boundaries (Dekker, 2004; Seal et al, 1994; Van der Meer-Kooistra and Vosselman, 2000). The fashion supply chain makes for a further fascinating research site within this field of inquiry.

It is important, however, that any such future studies be cognisant of the broader implications of calculative practices. We need to know more about how micro level initiatives are linked to macro agendas. The rapid movement of product and resources is not just a dynamic of interorganizational networks, but rather should be viewed as part of the apparatus for the construction and management of contemporary life. By unravelling the intricate linkages within the fast flowing fashion network, the role of calculative technologies in the shaping of social and economic life can begin to be uncovered.

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TABLE 1
List of Interviewees

Name	Function
Clive	Head of Design
Rachel	Casual Wear Buyer
Terri	Head of Merchandising
Fay	Head of Production
Shriaz	Finance
Elizabeth	Accounting (Stock)
Jan	Distribution Controller
Greville	Head of Logistics
Tom	Import Team
Richard	Chief Financial Officer