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Citation for published version:
Busco, C & Quattrone, P 2018, 'In search of the "Perfect One": How accounting as a maieutic machine sustains inventions through generative 'in-tensions'', *Management Accounting Research*, vol. 39, pp. 1-16. https://doi.org/10.1016/j.mar.2017.02.002

Digital Object Identifier (DOI):
10.1016/j.mar.2017.02.002

Link:
Link to publication record in Edinburgh Research Explorer

Document Version:
Peer reviewed version

Published In:
Management Accounting Research

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Download date: 17. Nov. 2026

In Search of the "Perfect One":
How accounting as a maieutic machine sustains inventions through generative '*in*-tensions'

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Abstract

The paper contributes to the debate regarding the incompleteness of accounting representations and performance measures by highlighting the role that such incompleteness plays by prompting and sustaining a continuous search for perfection which, however, is never achieved. Thanks to the information collected thorough a longitudinal case study of an Italian mid-size fashion firm, we illustrate how accounting visualizations offer a visual space that generates productive tensions that sustain this process of scrutiny, questioning and continual search. Theoretically, we draw on the notion of epistemic objects combined with the findings of visual rhetoric in order to explain the role of the intrinsic incompleteness of accounting representations and the visualizations that are produced and referred to in this continuous process of search for perfection.

Key words: accounting, maieutic machine, collection, in-tensions, epistemic objects.

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1. Introduction

"From time to time I still attend the collection meetings. I still enjoy seeing a bunch of professionals eager to deliver the perfect one. [...] *On a number of occasions, cross-disciplinary collaboration soon gives way to a healthy confrontational reality that often requires my intervention to manage the opposite views and concerns around the table. When this happens, and eventually compromise is finally achieved, I immediately think about maintaining this energy and diversity for our next collection, which is literally just around the corner"*
(The founder of Monnalisa).

With these words the founder of Monnalisa, an Italian medium-sized firm specializing in children's fashion, discusses his continuous search for the 'perfect' garment, an unfulfilled dream that he still stubbornly pursues, even after having formally retired from every executive position in the company that he founded. What sustains this search is surely a matter that could be addressed from various angles. We are particularly interested in whether accounting visualizations play a role in sustaining such a search.

Aiming to address this issue, we combine the literature on epistemic objects (Knorr Cetina, 1997; 1999), i.e. knowledge generating visualizations such as scientific representation or accounting, with literature regarding visual rhetoric (Barthes, 1970; Carruthers, 1990; 19998; 2015) in order to investigate whether the intrinsic inability of accounting to provide complete representations (Burchell et al, 1980; Quattrone and Hopper, 2005; Jordan and Messner, 2012) plays any role in prompting and sustaining this search. On the one hand, the notion of epistemic object allows us to show how visual representations prompt an unfulfilled desire for perfection (the search of the perfect one, to which the founder of Monnalisa refers). On the other hand, the reference to rhetorical figures such as the grid (otherwise called *topica*, Barthes, 1970), which in the case of Monnalisa takes the shape of accounting figures organised into the budget and spreadsheets, and the *ductus* (i.e. a path designed to lead the user onto a continuous process of search, questioning and scrutiny; Carruthers, 2010), helps us to frame the empirical material collected, in order to show how this search for perfection is sustained while acknowledging the impossibility of its realization.

The paper contributes to those studies in accounting that have addressed the incompleteness of accounting representations (Quattrone and Hopper, 2005; Jordan and Messner, 2012) and performance measures (Wouters and Wilderom, 2008) by highlighting the role that this incompleteness plays in prompting a continuous search for an unfulfilled perfection and how it generates creative tensions that sustain such a process of scrutiny, questioning and search. We also corroborate and contribute to the classic classification of the roles that budgeting plays in organizations and societies – see Burchell *et al*., 1980 – by illustrating how, since the point

when this seminal article was published, the theorization of accounting calculations has come the full circle: from accounting and a machine that provides answers via calculative devices, to powerful tools for questioning that we refer to here as a maieutic machine (where the term 'maieutic' refers to the Socratic method of generating knowledge by asking questions, and it is derived from the old Greek, *maieuticos*, 'midwifery').

The paper is organised as follows. Section 2 offers a literature review regarding the incompleteness of accounting representations and performance measures, and links the relative literature to that on epistemic objects. Section 3 introduces the rhetorical figures of the grid (or *topica*) and the *ductus,* explaining their theoretical relevance in order to understand how these visualizations prompt and sustain search processes. Next, while Section 4 provides the details of our fieldwork, data collection and analysis, section 5 illustrates the case material. Section 6 discusses the field material in relation to the theoretical insights, and portrays accounting as a *maieutic machine for* sustaining inventions through generative '*in*-tensions'. Finally, Section 7 summarizes the findings and delineates an agenda for further research.

2. Literature review

2.1 On the enabling power of incomplete accounting representations

Since Burchell et al. (1980), it has been clear that accounting information is often used for reasons that go well beyond a functional aid to decision making. Hall (2010), for instance, argued that the production of accounting information may help in gaining knowledge about the work environment surrounding managers and that it constitutes only a subset of the information influencing managerial work. Jordan and Messner (2012) stressed how such information is often incomplete (see also Wouters and Wilderom, 2008) and how this lack of accuracy may not even be perceived as a problem by managers and becomes a matter of concern only if it limits their operational ability, otherwise generating enabling effects (Ahrens and Chapman, 2004). In this respect, Busco and Quattrone (2015) illustrated how the ambiguity of Balanced Scorecard performance indicators contributes to its use within organizations, guarantying engagement and strategic innovation, thanks to the space left available for questioning and debate by the lack of representational abilities of the performance measurement system.

Incompleteness of information can therefore be seen as having a positive (and not a negative) effect on managerial actions and organizational dynamics. Such incompleteness leaves room for debate over strategic courses of action due to the high uncertainty (Jørgensen and Messner, 2010; Wouters and Wilderom, 2008), opacity (Dambrin and Robson, 2011), and fragility (Chua, 1995; Qu and Cooper, 2011) that surrounds accounting numbers (Meyer, 1986). Chennall *et al*., for example, have illustrated how the production of accounts has "the potential to provide a fertile arena for productive debate between the individual and groups who have different values" (2013, p. 269, drawing on Stark, 2009) and how it "can serve to 'crystallize' the compromise" among such different values providing them with transparency (Chennall *et al*., 2013, p. 270). These findings echo those in other works that have stressed how accounting (Davison, 2014) and other forms of visualizations, (e.g. engineering drawings, Bechky, 2003;

business models, Doganova and Eyquem-Renault, 2009; power point, Kaplan, 2011), construct shared meanings and platforms of mediation to stabilise and mediate among diverse interests (Briers and Chua, 2001).

And yet, situations in which managers use accounting and other visualizations to reach agreement are the exception, rather than the rule (Cohen, *et al.* 1972; Cooper, *et al.* 1981). Star, for instance, stressed how certain artefacts, visualizations and data producing techniques "allow different groups to work together *without consensus*" (2010, p. 603, emphasis added) and how her research was motivated by "a desire to analyse the nature of cooperative work *in the absence of consensus*", for in her field work such a "*consensus was rarely reached* [...] *but co-operation continued*, often unproblematically" (2011, p. 606, emphasis added). This seems to be an interesting statement that brings us back to the problem of reconciling the persistent incompleteness and inadequacy of accounting's representational power and its persistent use within organisations in situations where agreement, alignment, and transparency are not the norm.

The following section engages with the literature on epistemic objects (Knorr Cetina, 1997; 2001), which suggests that the intrinsic imperfection of such representations generates an unfulfilled desire for perfection. We then move to rhetoric in order to illustrate how the search for this impossible-to-achieve perfection (also referred to in the title as the 'search for the perfect one') is sustained by the use of rhetorical figures.

2.2. Epistemic objects: incomplete representations and structures of "wanting and desire"

"Epistemic objects" (Knorr Cetina, 1997; 1999) are knowledge generating objects such as scientific representations and market devices (see Preda, 2009) that provide phenomena with visual contours. Epistemic objects are conceived of as "stand-ins which compensate for a more basic lack of [the] object" that they represent (Knorr Cetina, 2001, p. 176). They stand for something other than themselves (what they intend to represent) and, as much as any representation, they are characterized by their incompleteness and "non-identity with themselves" (*ibid*.). The incompleteness of the representations that epistemic objects produce is an important feature because "only incomplete objects pose further questions, and only in considering objects as incomplete do scientists [or financial analysts and managers] move forward with their work" (Knorr Cetina, 2001, p. 176). This incompleteness is therefore a condition for these objects to prompt a desire to fill the knowledge gaps that epistemic objects themselves inevitably create. Yet, given that these representations "never quite catch up with the empirical object", pursuing this desire makes epistemic objects reiterate the lack rather than eliminating it (Knorr Cetina, 2001, p. 185). They are, therefore, characterized by a structure of "wanting and desire" that is similar to the "structure of wanting that characterizes the self" where "desire is born in the envy of the perfection of the image in the mirror" (Knorr Cetina, 2001, p. 185, drawing on Lacan, 1975).

The unfolding nature of epistemic objects is a key element in overcoming realist and functionalist approaches that conceive of objects as finite 'things', be these trees, clothes or reified institutions. Rather, as argued by Nicolini, Mengis and Swan (2012), epistemic objects are 'things' because they act, i.e. they perform (Callon, 1988; Latour, 1999; MacKenzie, 2006) and

produce effects (Thrift, 2007[affect]). In this sense, as much as a disease is irrefutably an object because it kills (Law and Singleton, 2005), an accounting system, a financial algorithm and other representational devices are objects not because of their finite being but because of their performativity, which, however, does not actually lead to closure but to further openings. The result is that epistemic objects end with "increasing rather than reducing their complexity" (Knorr Cetina, p. 2001, p. 181, see also Latour, 2001), unlike black boxes, which are instead, characterized by closure and clear definite boundaries.

The approach based on epistemic cultures is also useful for addressing relations between incompleteness and accounting, if one conceives of accounting as a system of inscriptions,[1] in which entries made in 'T' accounts "are not the world" but rather traces that "only represent it in its absence" (Latour, 1987, p. 247). As in every attempt to provide an account, accounting systems are incomplete and always involve a *lacuna* (Agamben, 1998), i.e. an absence that generates and calls for further questioning. From a constructivist point of view, accounting representations are not signs in a conventional sense (Hines, 1988) but acts of force and engagement (Fabbri, 1998), which attract their users by offering procedural instructions on how to interrogate the unknown (Quattrone, 2015). They are not passive traces, reflections of overarching agencies, but instead they are powerful signs that act and cause transformations. An accounting inscription, such as a performance indicator, can therefore be conceived of as an action. This is, in a nutshell, what can be inferred from the studies of Lipe and Salterio (2000), and Cardinaels and van Veen-Dirks (2010) when they stress how different visual arrangements of performance measures generate different effects on users. As with epistemic objects, accounting as a system of financial representations, emerges because, and it is sustained by, the lacks that it generates, or the absences it attempts to *re*-present (meant as making present *again*). As much as the mirroring of incomplete epistemic representations prompts a desire for perfection, accounting inscriptions generate a modern desire for perfection, which is, however, never achieved.

However, the lack and absence entailed by visual inscriptions and the methodological ability of epistemic objects to "suggest which way [to go] forward" (Knorr Cetina, 2001, p. 185) so to trigger forms of desire and attachment (Nicolini, Mengis and Swan, 2012), are not enough, in our view, to fully explain how accounting continues to engage users in collective innovation processes, while at the same time failing to generate that perfection whose desire it prompts. One needs to explain in what ways, and through which specific and concrete practices, accounting indicates this 'way forward' (be this the generation of innovation, the provision of knowledge of the work environment, and so forth). What seems to be needed in order to fully understand the power of accounting inscriptions, despite and thanks to their incompleteness, is to see how individuals and organizations keeps looking at themselves in a mirror such as income statements, balance sheets, and key performance indicators, in spite of the lack of beauty of the figures that this mirror reflects. In other words, how can it be that, despite the recurrent failure of accounting to provide a transparent mirroring of financial realities, it nevertheless remains a powerful mode of ordering organizational action especially in situations of disagreements and tension? What role, if any, does accounting play in the 'search for the perfect one', referred to in the title of this paper?

[1] The term 'inscription' ''refers to all the types of transformations through which an entity becomes materialised into a sign, an archive, a document, a piece of paper, a trace'' (Latour, 1999, p. 306).

The next section draws upon studies on rhetoric to gain insight into how visualizations can be conceived and designed beyond a simple representational purpose in order to interrogate the unknown and, therefore, encourage belief in the possibility of eventually finding perfection.

3. Maieutic Machines: how rhetoric sustains inventions through generative 'in-tensions'

Rhetoric has often been associated with accounting and persuasion (Aho, 1985; Carruthers and Espeland, 1991). The etymology of the word 'inventory' (from Latin *inventio*, the first canon of classical rhetoric) points us towards a more complex understanding of rhetoric and the practices with whose development it has historically intertwined (included accounting, Quattrone, 2009).

Inventio originated from two different but related words, which are both relevant for accounting and the aims of this paper. The first is 'inventory', that is, in rhetorical terms, the classification of arguments and knowledge in spaces (*topoi*, in Greek, and *loci*, in Latin), which later took the form of accounts written in manuals and accounting books (Quattrone, 2009; 2015). More recent technological advancements have transformed these spaces on paper into ordered cells on spreadsheets that are used to keep the accounts. The second word is 'invention', that is, the generation of new knowledge, particularly by recombining existent 'topics' (see Barthes, 1970; Carruthers, 1990; 1998, 2015).

This link between *topos* (i.e. a space ready to be filled in with arguments) and 'topic' (i.e. the knowledge content classified into that space) is important for highlighting the intrinsic nature of rhetoric as a spatial form of reasoning, which was known in rhetoric as *ratiocinatio* (Carruthers 2015), whose etymology (from Latin *ratio*, meaning 'account', 'calculation', and 'computation'; Carruthers, 1998; Murray, 1978; Goody, 1996) provides a clue about the lost connection between rhetoric, accounting and rationality (Quattrone, 2009; 2015).

Barthes (1970, pp. 75ff) noted how the distinction between the rhetorical *topos* (or *locus*) and the 'topic' (conceived of as a substantive argument, meaning or concept) is crucial in understanding the knowledge generation power of rhetoric. A *topos* was part of what rhetoricians (from Aristotle onwards) would have called a *topica*, i.e. a method of knowledge classification that used a grid of empty cells as a classificatory device. The dimensions of this grid (either to be imagined mentally or to be drawn graphically on a piece of paper) could have been organised chronologically (with rows that mark the different parts of a speech, see the grid Figure 1), grammatically (with classificatory dimensions such as 'who?', 'what?', 'when?', 'why?', and 'how?') or, in late medieval and early modern times, through other more complex categories such as 'genus', 'correlations', 'constituent parts', and 'causes'.

An orator would make the subject to be discussed (say accounting) physically, or mentally, move along the dimensions on the grid, thus prompting a process of association between a given (and still unknown) subject to be discussed and a network of other concepts that were supported by the process of interrogation, which was framed by the dimensions on the grid (e.g. by asking '*What* is accounting?'; 'What is its *etymology*?'). Therefore, the grid provided the orator with a powerful method of investigation, thanks to which she could talk about any subject, even those of which she had very little knowledge.

This method of searching would always leave meaning latent, veiled, and not fully graspable as there would never be a full correspondence between the *topos* and the topic, that is, between the classificatory dimensions of the cells and the subject to be constructed via such an interrogation. The *topica* was a way of literally 'figuring out' meaning and substantial concepts that utilised the known (i.e. the dimensions of the grid) as almost an excuse for interrogating the unknown (the subject to be discussed). The Aristotelian *topos* was, therefore, "always a site of possibility, a productive 'vacuum'" (Hallett, 2011, p. 99). It was "a conceptual space without fully specified or specifiable contents: […] a region of productive uncertainty" (Miller, 2000, p. 141, quoted in Hallett, 2011, p. 92).

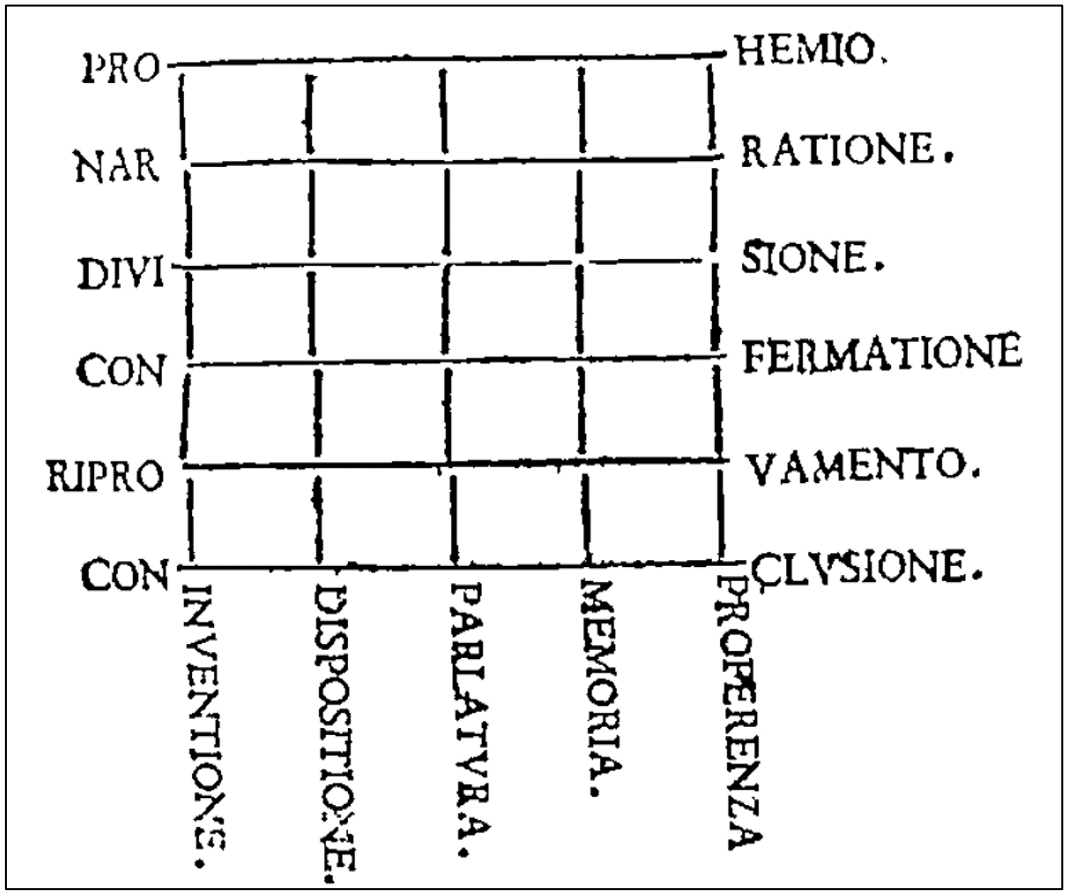

Figure 1 – A rhetorical grid (Source: Bolzoni, 2001, p.44)

Rhetoric, more than being about the communication of a 'given' message to a certain audience, was, instead, a method of knowledge classification *and* invention. It was a method that was nurtured by and produced doubt and uncertainty, which were, in turn, generative of further questions, searching and, therefore, further knowledge. As with every epistemic attempt (Knorr Cetina, 2001), rhetorical *topoi* helped the composition of knowledge that was always incomplete because its objective was not to represent the knowable but to interrogate and reflect on the

unknowable (this was the case, for instance, when rhetoric informed religious meditations about 'God') (Carruthers, 2015).

In order to favour this generative feature, rhetoric as a spatial form of reasoning combined two opposite movements: one leading to the reduction of the complex, uncertain and unknowable to the manageable, certain and known, and another leading instead to the augmentation of knowledge. For example, the grid of the *topica* provided some simple (*brevis*) categorical dimensions (e.g. 'who', 'what', 'why'), which, by reducing the unknown to known grammatical categories, constituted the conditions for the interrogation of the unknown to happen, thus augmenting our knowledge of a given subject. It was by counterpoising *brevitas* and augmentation and inhabiting the space in the middle of these two opposites that the search for new knowledge could be conducted. Therefore, a good orator would live in the space between the *topoi* and the topic, in a tension generated by these two opposite movements. And, in fact, in rhetoric, there is not *inventio*, i.e. a useful classification, without *intention*, that is, without a purpose (Carruthers, 1990). Furthermore, *intentio* indicates the need to leave the purpose of that classification 'in-tension' in order to leave room for further pragmatic classifications.

Ratiocinatio, meant as a form of reasoning that relied on these pragmatic *topoi*, was therefore relying on, and seeking this tension (this dissonance, as Stark would later describe, 2009) though a technique that was otherwise known as *controversia*, i.e. a technique of constructing "pairs of terms compared and contrasted, brought into neighbourly conjunction" in order to foster speculation and the exercise of judgment and reflexion (Carruthers, 2015, p. 13).

The rhetorical grid was just one of the vast repertoire of *imagines agentes* (Bolzoni, 2001) such as grids, trees (or hierarchies) and wheels that rhetoricians utilised to aid memory by the composition and the establishment of new connections between the elements inventoried through a web of techniques, practices, and artefacts (Bolzoni 2002; see also Carruthers 1998, pp. 198-199). These images resemble more recent theorizations of knowledge producing devices as objects (see Knorr Cetina, 1997) that assume a stable identity and functionality, not because they produce neutral representations, but because they produce effects (Thrift, 2007). This is why these images were also called "machines" (Bolzoni 2001), in which the Latin term *machina* was not synonymous with 'mechanical' and 'predictable movements', as we now would conceive it, but addressed anything that helped the construction of something, be this a building or a thought (see Busco and Quattrone, 2015, in relation to the Balanced Scorecard as a rhetorical machine).

These machines, though, constructed knowledge through a very specific technique of interrogation, utilising what was known as almost an excuse to interrogate what was not known. Their focus was not on the visible but on the invisible. In this sense, their method was intrinsically 'maieutic', that is, a Socratic way of generating knowledge by asking questions about what one does not know. It was thanks to this maieutic machine (from the old Greek, *maieuticos*, 'midwifery') that concepts could be given birth (as, once again, the etymology of the word reveals, from the Latin *conceptus*, i.e. conceived in order for it to be given birth).

However, this maieutic process had to be sustained. How could a search for the unknown be sustained when it was explicitly conceived to be incomplete, since it was underpinned by the 'lack' of substance of the empty cells?

Rhetoric offers another figure to address this issue. Each locus in a rhetorical journey (be this in a visual representation or a chapel in a physical space such as a church), constituted a

punctus, that is, a point, which marked the composition process of knowledge and beliefs, in what could be defined as a ritual.[2] Not by chance, these machines (churches, for example) were used in the context of religious practice, in which going through this route represented a *ductus*, i.e. a way, a flow and a movement, that began with the realization of being in perdition, continued with the composition of two opposite visions (e.g. hell and even; profit or loss) and eventually ended with the possibility of making a choice, of finding salvation and realising a vision (be this of God and truth, or one concerning a business strategy). It was this vision (a *theoria*, i.e., a theory, from *theós*, 'God' and *theorein*, a way of seeing, in ancient Greek) that was religiously sought for and never found, although it was continuously sustained by creating tensions among opposites.

The etymology of the word *raciocinatio* (from *ratio*, as noted above) thus reminds us that this search was done and sustained through visual and material *rationes* (i.e. 'schemes', 'structures' or 'designs') and reveals that these designs needed to have, and also to generate, specific visual and material features. In particular, they had to generate and sustain a sense of proportion, as the reference to the word *ratio* reveals, by maintaining a tension amongst the various parties by using these *rationes*. And in order to sustain a proportionate relationship, one needs to be in a constant state of productive tension.

4. Research methodology and case study details

4.1 The case of Monnalisa: context and background

The case focuses on Monnalisa[3], a medium-sized company located in Arezzo[4], Italy, which operates in the fashion industry. Founded in 1968, Monnalisa designs and sells garments and accessories for children[5]. To distinguish the company from the main competitors, the founder decided to focus on a high-quality segment of the market, offering coordinated articles of

[2] By ritual we mean a sequence of activities establishing a relationship between objects, spaces, images, words, and texts, resulting in a continuous enactment of knowledge and beliefs (see also the notion of 'orthopraxis', which stresses "a set of experiences and techniques, conceived as a 'way' to be followed, leading one to [a] path to of enlightenment", Carruthers 1998, p. 1; see also Bell 1997, p. 191). In accounting, the notion of ritual in relation to the role of accounting in generating order, has been explored by Ezzamel 2009.

[3] Monnalisa is both the name of the company, and the brand name of the clothing designed and sold by the company. For the company web site, please see www.monnalisa.eu. During the last few years there have been a number of contributions that refer to Monnalisa in case studies (see Giovannoni and Maraghini, 2013; Busco *et al.*, 2012a/b). While some of the background information on the company is unavoidably similar, the purpose and the empirical evidence this paper draws on is novel.

[4] The clothing sector has always played an important role in the economy of the region surrounding the city of Arezzo. This has provided significant opportunities for Monnalisa in terms of networking and available know-how.

[5] Monnalisa bases its business on four long-established brands: *Monnalisa Bebé,* suitable for ages 3 to 6 months; *Monnalisa Girls,* for ages 2 to 12 years; *Chic Monnalisa*, for 4 to 16 years of age; *Jakioo,* a trendy brand for 6 to 16 years. Two newer brands were added recently: *Ny&lon* a sportswear brand for 3 months to 16 years of age, and *Hitch-Hiker* for boys from 3 months to 12 years of age. Currently, Monnalisa has diversified its business by partnering with furniture and accessories manufacturers to market products for little girls' bedrooms, such as white-washed bed frames and furniture with a vintage flavour, cabinets with soft spirals, and sinuous chairs and lamps.

clothing. Therefore, creativity and inventiveness have been considered essential for the survival and growth of the company since its foundation. Consequently, its collections and lines of products have been characterized by a continuous search for high levels of style, differentiation and production quality.

Monnalisa is entirely owned by the founder's family. Since February 2010, when the founder formally retired, the company has been managed through a Management Committee, which is chaired by the Managing Director and includes all heads of operations. The committee meets every Monday and its purpose is to execute the strategy formulated by the Board of Directors (chaired by the founder, who retained the position as President of the company). The strategic plan has a five year horizon, and is based on two annual collections. Since 2009, inter-functional workgroup meetings are organized every week to discuss coordination across the internal functions of the company's value chain. Finally, *ad hoc* focus group meetings, with the relevant stakeholders, have been held throughout the last decade to receive feedback from external and internal stakeholders on specific issues and concerns.

The company's mission is to create value and values over time by offering a fashionable, high quality, high identity product for both clients (the retailers) and consumers (see Monnalisa's 2014 Annual Report). According to the company's Annual Report this mission should be fulfilled through a flexible, reliable and customized service; a dynamic and challenging work environment; an ongoing and profitable relationship with suppliers; and a sustainable company policy for the territory[6]. Despite the increasing turbulence of the fashion market, during the past fifteen years, Monnalisa has experienced considerable growth in turnover (from 2000 to 2010 Monnalisa's revenues tripled), which reached about 41 million euros in 2011. As for the markets, 90% of their customers are from Europe (54% from Italy). In 2015, the company employed about 60 people but it also relies on a large number of contractors, as illustrated later in the paper.

The case provides insights into the way in which accounting, performance measurement and reporting participate in the creative processes within Monnalisa. In particular, we offer a detailed illustration of the mechanisms and practices at work that sustain the cross-disciplinary collaboration underpinning the creation of the collections through the company's business model and value chain. We describe how and why accounting, performance measurement and reporting practices engage users in conversations that sustain the ongoing search for a 'sustainable collection' while attempting to mediate among all the interests at stake.

The choice of Monnalisa as a case study for this paper was driven by many variables, some of which are serendipitous (such as the access granted, see Hirsch and Gellner, 2001) and others are practical (the premises of the company were very close to the place where one of the two researchers resided at the time of the study, see Marshall and Rossman, 1999). As for access to data, the company provided us with substantial access to written material and internal documents that were crucial in exploring how and why accounting participates within processes of business and social innovation. This was complemented by a series of interviews that spanned over a decade, and was facilitated by the close location of one of the researchers to the company site.

[6] See Monnalisa 2014 Annual Report.

4.2 Data collection and analysis

The case of Monnalisa is inherently longitudinal (Scapens, 1990). From March 2004 to June 2015, empirical evidence for this study was collected through multiple sources including semi-structured interviews, written and electronic documentation, informal discussions, and participation in internal workshops and public presentations. We relied on the interviews and on the documentation collected as the main source of data, and drew on the other sources of information mainly for triangulation, as well as on supplementary sources for our understanding. The interviews (49 in total, with 13 different informants) were conducted over a decade at the firm's headquarters and occasionally in other locations, such as conference locations or university premises. Table A offers a detailed account of the interviews, illustrating the positions that the respondents held, the departments they were from, and the number of interviews conducted over the last decade.

The research began in 2004 when one of the authors met with the founder of Monnalisa and the CFO (who is also in charge of Social Responsibility) to discuss the performance measurement systems (the Balanced Scorecard, in particular) and corporate social responsibility within medium-sized enterprises operating in creative industries. In order to gather more information and triangulate data, additional interviews were held with other key informants from various departments participating in the cross-disciplinary research, design and development of the collection. In particular, interviews were conducted with managers and employees from Design, Sales and Marketing, Finance and Production. The interviews were conducted periodically throughout a decade, with the last group taking place in June 2015.

The content of the interviews and the issues discussed have varied throughout the years. Although the context and background has always been determined by the role of accounting, budgeting and performance measurement in the development of Monnalisa's collections, the specific focus of the discussions ranged from issues of coordination and integration to the role played by formal and informal control systems in dealing with creativity and garment development, as well as from financial and non-financial indicators used to monitor the collection, to the emergence of new forms of internal and external reporting. A number of interviews also focused on understanding specific tools, such as the Provisional Budget, Cost Cards and technical cards, or learning the functions of Monnalisa's management systems, such as the Board of Directors, the Management Committee, inter-functional workgroups and the focus groups with relevant stakeholders. More recently, a number of meetings have concentrated on issues of sustainability and the structure and content of Monnalisa's new form of corporate reporting (i.e., Integrated Reporting)[7].

Table A – Schedule of interviews (2004 - 2015)

[7] The journey of Monnalisa towards the adoption and use of Integrated Reporting is not illustrated in this paper, and will be the focus of future studies.

	Interviewee	Monnalisa Departments (in alphabetic orders)	Number of Interviews
1	Founder	n/a	9
2	Current Managing Director	n/a	4
3	Design Manager 1	Design	6
4	Design Manager 2	Design	2
5	Stylist 1	Design	3
6	Stylist 2	Design	1
7	CFO (and head of Sustainability)	Finance	10
8	Accountant	Finance	3
9	Marketing and Sales Manager	Marketing and Sales	3
10	Production Manager 1	Production	4
11	Production Manager 2	Production	2
12	Retailer	n/a	1
13	Supplier	n/a	1
Total			49

The interviews were open-ended. They typically lasted from one to two hours. The majority of interviewees were interviewed more than once in order to clarify key issues that emerged as the study progressed. Often, different informants were asked very similar questions, in order to acquire different perspectives on the same issues and/or to confirm individual accounts. Most of the interviews were recorded and transcribed into electronic files.

4.3 The collection: actors and phases of Monnalisa's "delicate balancing act"

Similar to the majority of companies operating in the fashion industry, Monnalisa's business model and value chain are structured and managed around two collections of clothing per year, one for the autumn-winter, and the other for the spring and summer seasons. Each collection kicks-off with a collection briefing (see point [*1*] in the collection's business model and value chain represented in Figure 2), a meeting in which the heads of the Design, Sales and Marketing, Production, and Finance Departments identify and finalize the broad plan for the collection by listing the number of lines, as well as the categories of products (for example, the shirts, skirts or

shoes) that will be featured in the upcoming collection. Next, within Monnalisa, (*2*) research, design and development of the collection, and the preparation of the prototypes and samples are carried out by the Design Department in strict collaboration with the other functions.

Garment samples are then presented to retailers through (*3*) show rooms and fashion shows, as well as through a network of independent sales agents who work for Monnalisa during the two major sales campaigns, allowing for (*4*) the collection of orders and the first feedback on the new collections[8]. In this context, a key role is played by the Sales and Marketing Department, which is responsible for providing accurate sales forecasts for the sales campaigns, and for collecting feedback and comments from customers (retailers) and (final) consumers on the style, quality and overall value of the clothing. This information is communicated by the Sales and Marketing Department to the Design Department (for style projects), as well as to the Production Department for production planning[9].

Like a number of other companies of a comparable size operating in the fashion industry, Monnalisa has a flexible production structure. The purchases and storage of raw materials (*5*), as well as the fabric cutting (*6*) are carried out internally by the Production Department. In contrast, all of the transformation phases (*7*) from raw materials to work-in-progress, and occasionally to finished goods, are outsourced to small suppliers (referred to as *façonists*[10]) primarily located in central Italy. Components, work-in-progress and finished products are then delivered to Monnalisa's premises in Arezzo, where the Production Department is responsible for logistic flow control and management (*8*), component assembly and work-in-progress (*9*), quality and safety control of the garments (*10*), and their storage and distribution to national and international markets (*11*). All post-sales activities (*12*) are carried out by the Sales and Marketing Department. As suggested by the founder, the collection develops through a series of connected phases that require balancing throughout:

> "The collection represents the very centre of our business model. It is a recurrent process encompassing a number of inter-connected phases that dictate the rhythm and the contents of value creation within the company. […] Overall, the collection is a *delicate balancing act* [emphasis added] that calls for confrontation and cooperation among the different parties and interests at stake. Ultimately it is a balance between creativity and efficiency that we need to achieve, at our best, every six-months, if we intend to survive and, possibly, grow in the current market conditions".

[8] Traditionally, Monnalisa sold its products through independently owned single-brand and multi-brand shops, and department stores. Only recently has Monnalisa started to sell its products directly to the final consumer through its web site and the first company store in Arezzo.

[9] Production is planned according to the orders received during sales campaigns.

[10] The relationship with suppliers (of fabric and accessories) and façonists is managed by the Production Department (although suppliers and façonists are not involved in cross-functional teams). Around 50% of the suppliers have long-term relationships with Monnalisa, which are renewed collection by collection. This percentage increases to up to 90% for the façonists.

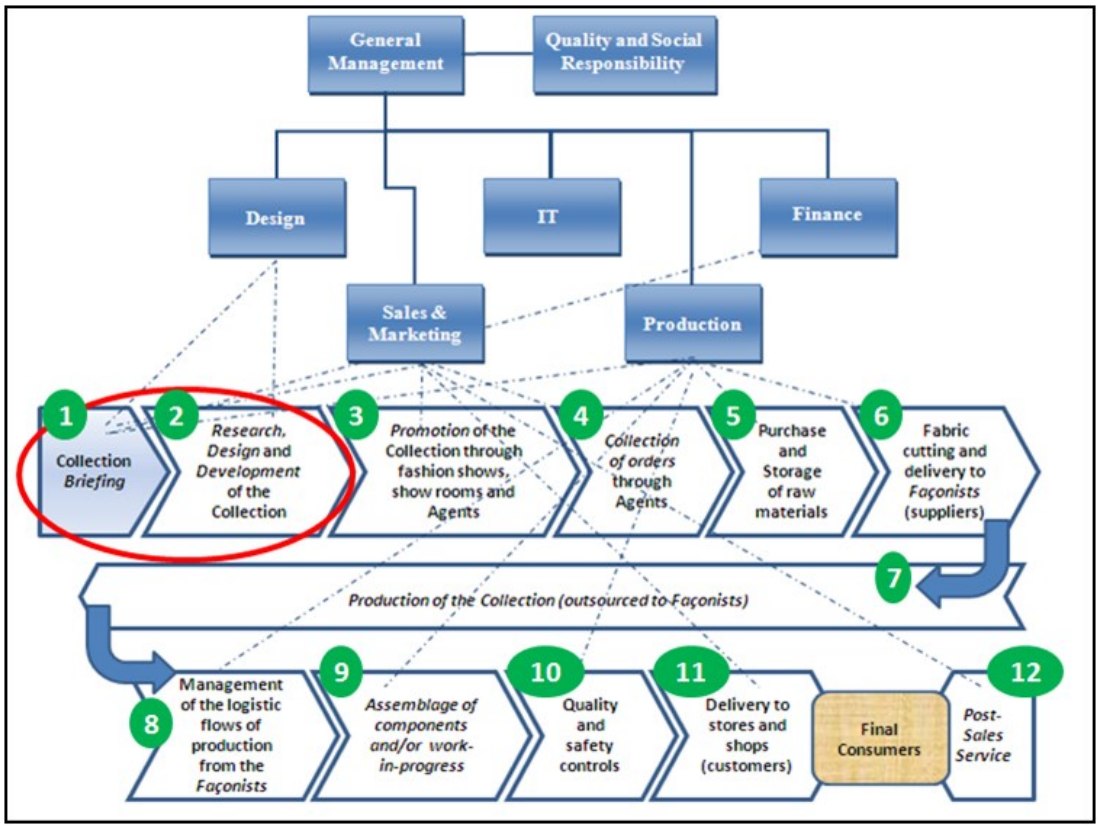

Figure 2 - The collection: actors and phases of Monnalisa's business model and value chain

Notably, the phases of different collections overlap at various points in time. As stressed by the founder:

> "Our employees need to be skilled and flexible enough to manage, at the same point in time, the different issues, concerns and fundamental milestones of multiple collections. For example, as we speak, we are delivering the 2012 Spring/Summer collection to stores and shops, gathering orders for the 2012 Fall/Winter collection and, finally, working on the initial briefing for the 2013 Spring/Summer collection. And again, this aspect calls for balancing not only within a single collection, but also across time and throughout future collections".

In this paper, we focus on the early and fundamental phases of Monnalisa's collection. During these phases a number of business functions, professionals and stakeholders engage in an ongoing process of cross-disciplinary collaboration that starts with the collection briefing and continues throughout the research, design and development of the collection (points 1 and 2 in the oval in Figure 2). Although the parties involved in this process need to collaborate on achieving common strategic objectives that are clearly identified by the mission, vision and strategic drivers of the company, they are, however, motivated by different understandings, interests and concerns that affect their aspirations and behaviour. As a consequence, the research, design and development of the collection is also characterised by severe confrontation on what it takes to design and manufacture *sustainable collections* for the benefit of the company and its

stakeholders. As we illustrate below, this process is mediated by a number of accounting and performance measurement practices - namely, the Provisional Budget, the Balanced Scorecard, and the Cost Cards.

5. In search of the *perfect one*: the role of Accounting in the creation of *sustainable collections*

This section describes Monnalisa's journey toward the creation of a *sustainable collection*. In doing so, we illustrate the process of cross-functional collaboration, which characterises the briefing, as well as the research, design and development of the collection. We shed light on the different actors involved, in addition to the ongoing search for the "perfect one", which entails trade-offs among the aesthetic aspirations of the stylists, the final cost of a garment, the complexity of production, the ethical concerns, as well as the promises made by sales managers to agents and clients.

The empirical material presented in the following pages illustrates how the journey towards the creation of a *sustainable collection* is mediated by accounting and performance measurement tools such as the Provisional Budget, Cost Cards and the Balanced Scorecard. As we illustrate below, discourse around accounting and performance measurement practices sets the platform on fire at the start of the process, stimulates confrontation among the different views, concerns and positions that characterise the development of the collection, and, finally, it contributes to decision making by questioning and validating what constitutes a *sustainable collection.*

5.1 Setting the "balancing act" on fire: the call to "leave a mark" on Monnalisa's collection

Although he is officially retired, the founder and President of Monnalisa, is still very much involved in the development of the collection. So, even though he is fully aware of the current uncertainties and increasing financial and operational challenges that characterize the industry and the market, he continues to lead Monnalisa's employees by urging them to live by the company's values, in the attempt to fulfil the mission that, he claims, "enabled Monnalisa to prosper in the first forty years since its inception". "From time to time I still attend the collection meetings. I still enjoy seeing a bunch of professionals eager to deliver the perfect one [garment]", states the founder of Monnalisa.

"Within Monnalisa we all dream about the *perfect one,* but I do sometimes wonder if it is possible to accomplish this dream, if such an item exists at all", suggests a production manager, who then continues by adding:

> "I have seen several designers over the years entering meetings by waving their drawings and claiming that their latest idea has fulfilled the magic formula of maximizing the garment's beauty and quality, while minimizing the associated costs and the complexity of manufacturing. But, unfortunately, it never happens. There are so many elements in the puzzle that I suspect that everyone in Monnalisa has a different idea of what makes a garment the perfect one. That's probably the reason why we never quite get there".

Balancing creativity and efficiency, as well as ethical concerns, into *sustainable collections* is presented as the key challenge throughout the process of research, design and development of the collection in Monnalisa. It is a challenge that requires cooperation among the different parties involved (internal and external). As suggested by the Chief Financial Officer (CFO) of Monnalisa:

> "The need to preserve and promote continuous product innovation is a strategic priority for high-end fashion companies such as Monnalisa. Indeed, no one doubts that the inspiration of our stylists is the main resource for our competitive advantage, but I am also certain that this resource would have already dried up without the efforts made by the rest of us in channelling such creativity into sustainable value".

Despite the awareness demonstrated by the company's founder about issues such as production efficiency, financial sustainability, as well as social and environmental impact, his entrepreneurial gut feelings and strong passion for the style and identity of Monnalisa's creations makes compromising on style and creativity always the last possible solution. A few hours before a collection briefing was about to take place he emphasised:

> "Sure, we want our stakeholders to be proud of Monnalisa's way of running the business. We want our reputation to be solid [...] this is why sustainable value creation is at the centre of our strategy and business model. However, we simply cannot risk that the search for an obsessive level of operational efficiency or bottom line contribution ends up damaging the creative potential of the company. If the inspiration of our stylists suggests using ribbons, pearls or glitter in their designs, we need to strive to accommodate that as much as we can".

As described earlier, work on new collections begins with the *collection briefing*. Cross-disciplinary collaboration is at the very centre of this meeting, in which the heads of the Design, Sales and Marketing, Production, and Finance Departments discuss and identify the main features of the forthcoming collection, and decide the number of lines and categories of products to be included. Although this is not always the case, Sales and Marketing, Production and Finance tend to collide with Design during the briefing. This meeting is often the place where the "delicate balancing act" (as described by the founder above), which requires confrontation and cooperation among the different parties involved, actually begins. As illustrated by a Sales and Marketing manager:

> "The early meetings held for structuring the new collection are generally opportunities for intense discussion. We all go there with strong ideas and feelings. We have what has happened or what is happening with previous collections clearly in mind, as well as what has worked and what has not, which target has been achieved and which one has been missed. From a Sales and Marketing point of view we often talk over ways to understand consumers' tastes with the stylists. We rely on both the analysis of past data and the future outlook to prepare solid numbers concerning the possible right mix of lines and products for the basis of the meeting. Conversely, stylists build their arguments on their own feelings and ideas rather than on facts. I am not saying this is wrong, as ultimately this is where their creativity

comes from, but there are times when it is definitely challenging to reconcile the data we have on spreadsheets with the aspirations of thrilled designers".

Overall, the collection briefing offers a space where a number of conversations take place with the intent of achieving a series of compromises that facilitate the definition of the broad objectives of the collection in terms of *what to create* (and its quality standards), *when to create it* (fashion weeks and availability for the beginning of the season determine the timing of the various phases of the design, development and production processes), and at *what target cost*. Nevertheless, even if compromise is often the ultimate end result of the conversations at the briefing, as well as during the inter-functional workgroups that characterize the process of research, design and development of the collection, the content of the 'burning platform' set up by the founder at the start of each new collection is quite different, and calls for ownership and leveraging of the differences rather than for finding a mutual agreement:

> "Before any compromise is eventually sought out, each collection must be seen as a unique opportunity to wander around a space of endless possibilities. And the briefing kicks this process off [...]. Right at the eve of every collection briefing, I add fuel to the fire by visiting the different corners of the company, urging each person in the company to put feasible ideas forward and leave a mark in the creation of our new collection. Through the years I have never been interested in hearing about micro-strategies or tactics for striking a deal across functions so early in the collection journey. I just wanted to listen to motivations and great ideas on how to win in the market, and I encouraged people to prepare their business case and keep fighting for them during meetings. For this reason, and in spite of any possible need for compromising down the line to make the numbers in the budget work, I have always supported provocative ideas in the process, even when I knew it would have been nearly impossible to stick to them".

5.2 From research to sampling: the Budget as a "magnet" for engagement across functions

Monnalisa's creative process is kicked-off by the Design Department. The research, design and development of the collection entail a number of activities structured around the following five phases: *research, design, paper pattern drafting, prototyping, and sampling.* The first phase of *research* informs the way in which stylists approach the collection briefing. They rely on a variety of sources, ranging from their own ideas to inspirations coming from the market, and from their independent research to industry trend reports. The main objective is to try to anticipate where fashion will be going during the next season, as well as the styles, colours, fabrics and accessories that are likely to be popular. "The research phase is the cradle of our inventions", suggests a designer at Monnalisa. However, high degrees of innovativeness in this phase can lead to discussions in the collection briefing, as well as in the weekly management committees and inter-functional workgroups. In contrast to the Sales and Marketing manager quoted above, who was talking about the research phase of the collection, a designer pointed to the mission and strategic drivers of the company in order to 'defend' the need to search for *sustainable collections* through creativity and innovation:

> "Excelling in creativity and innovation is part of what we are and what we strive for. I understand that financial numbers and production concerns are important, but if this company has grown for so many years it is because we often had the courage to do things differently from the others, to follow our instincts, our inventiveness. In this way, we have developed and sustained our brand over time".

During the research phase, the type of fabrics and accessories to be used in the collection stimulates the discussion too. As illustrated by a Production manager, "it has happened that in the past our designers visited textile and accessories manufacturers to observe and evaluate the possible fabrics, colours and models to be used in the collection, and came back quite enthusiastic about specific components that they already pictured on the final garment. But unfortunately, we had to stop them". The exact reasons for preventing designers from purchasing and using specific materials range from poor quality to a lack of transparency in the policies, standards and code of conduct of the suppliers, and furthermore, from pricing to regulatory and legal issues. As the Production manager added, currently risk management and traceability plays a central role in dealing with suppliers, as well as in maintaining a high ethical standard in sourcing activities:

> "During the last decade, the aspect of risk has progressively acquired a central position in our management systems. And this is crucial for sourcing and supply management. We now identify risks, measure them, and put in place a series of actions to reduce their potential impact. With the current level of competition, we cannot really risk that our customers have any doubts about Monnalisa as a brand. Therefore, we now take extra care with the quality and safety of our raw materials, and we check them both internally and at the suppliers' premises. Full traceability of the garments is a priority for us. And sometimes, in spite of the requests of the designers, or the willingness to maintain a certain level of business continuity with our suppliers, we have to pull the plug if they do not meet our ethical standards".

The research phase is followed by *design*. Once stylists have selected the 'concept' of the collection, and have reflected on possible fabrics and accessories, the actual design phase starts. In this phase, the stylists sketch preliminary designs. Initially, designers use pencils for their sketches, but then translate them into digital blueprints through computer-aided design systems. The use of digital blueprints allows stylists to observe sketched designs of garments on virtual models, and in different colours and shapes. This enables them to potentially reduce the time for adjustments later in the development of the collection. Next, *the paper pattern drafting* phase addresses the technical aspects of the designs, which are extremely important as preparation for the production stage, and for instructing the façonists, i.e. the suppliers to whom the actual production of the collection is outsourced. Then, the paper pattern is cut to shape and placed on the fabric to guide the cutting.

Even if described as linear, the research, design and development process of the collection is extremely iterative. Fabrics, accessories and patterns are constantly reassessed in light of new information generated throughout the various phases of the process or collected from other internal and external sources. Notably, as the creative process unfolds, the Design Department constantly interacts with Sales and Marketing, Production, and Finance, which participate in the

development of the collection, furthermore, by monitoring the impact of what is being developed on the company's operations and performance. The main financial tool used to support the creation of the collection and monitor its overall development is the *Provisional Budget* (see Figure 3).

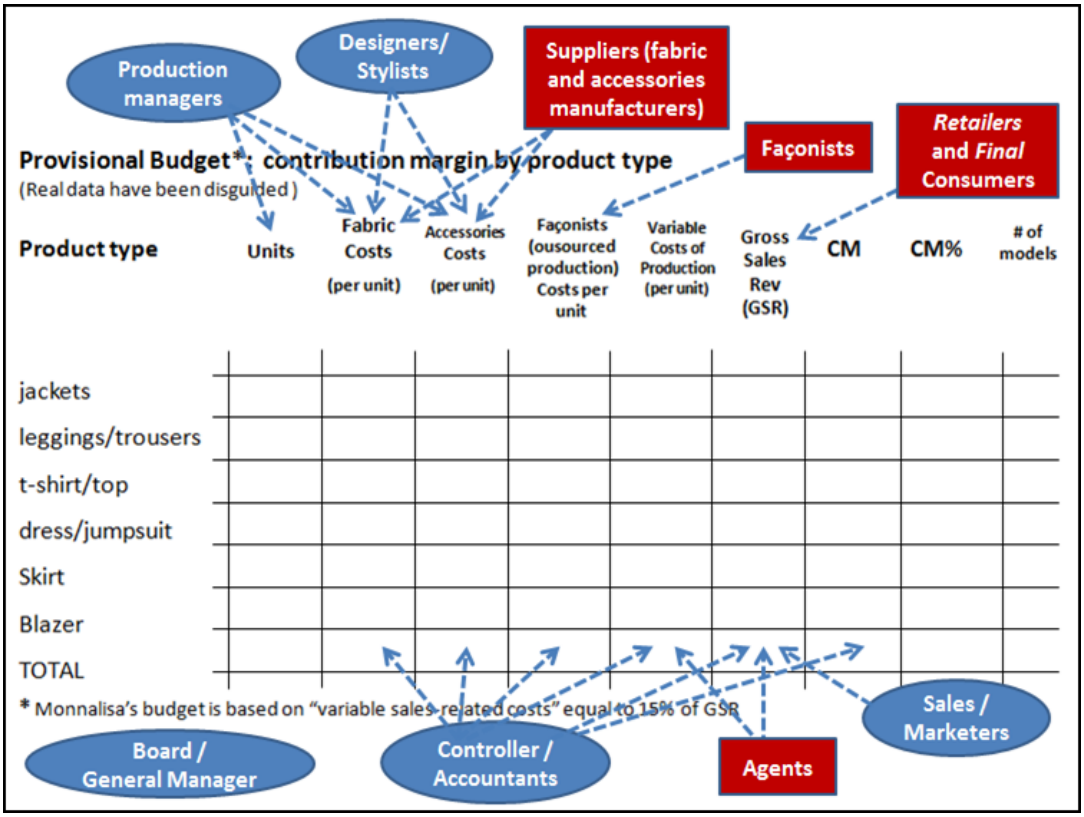

Figure 3 – The Provisional Budget of the collection and the multiple interests to be mediated

The Provisional Budget attracts the interest of the majority of the participants in the development of the collection since it includes a number of critical items, such as the number and type of units to be produced, the variable costs for fabric and accessories, the costs associated with the internal and external production phases, as well as the budgeted gross sales revenues, and the contribution margin by collection or by product type. Both internal (see the oval forms in Figure 3) and external (see the rectangular forms in Figure 3) stakeholders – such as suppliers, façonists, agents and customers – have an impact on, and are impacted by, the construction and use of the Provisional Budget. As illustrated by the CFO, the Provisional Budget plays a significant role within the Management Committees and the inter-functional workgroups:

> "When the provisional budget of the collection is presented and, then, discussed, the atmosphere of the meetings suddenly changes. People remove the pencil from their ears, and wear their glasses instead. Patterns, colours, stripes or ribbons suddenly disappear from the centre of the tables leaving space for the budget figures. Although many are not finance experts, they are aware of the underlying processes and

> challenges that the budget translates into financial terms. So they want to make sure they do not miss anything from the spreadsheets. Collection after collection, Department representatives have learned to focus on the measures to be checked first. These measures are deeply embedded in the provisional budget and are likely to constrain the work and affect the performance of the various departments in the months to come. Additionally, the provisional budget is likely to have an impact on the performance of external stakeholders, whose voice, although silent in the meeting, is a sort of background music that we have to take into account if we aim to create and deliver sustainable value".

The Provisional Budget acquires prominence as the collection enters the *prototyping* stage. In this phase a number of prototypes are built using different fabrics and accessories to experiment with various alternatives and styles. "They enable possible creations to materialize for the first time", suggests a stylist. These prototypes are then tried on a human model. This process leads to the selection of the models that will actually be listed and offered for sale. At the end of this phase there is an important *cost-driven gate*: only models that are able to stay within (or reasonably close to) the expense limits identified during the collection briefing, will be listed and will make it to the shop shelves. Since prototyping is reasonably close to the end of the development of the collection, during this phase designers tend to collide with the parties that challenge the feasibility of the garments.

Interestingly, the Provisional Budget is a document that attracts and engages, rather than divides, the different parties engaging in the conversations. "Even if it is owned by Finance, each collection's budget is very much co-created. It is not just about numbers, rather, it synthesizes much more than that. It captures what we are and what we do, and that's why it is signed off by all members of the management committee", suggested a stylist in the Design Department, who then added:

> "I become nervous when others start to question the feasibility of our prototypes. I do not feel comfortable when they enter our territory by suggesting how models might be modified, pointing fingers at the available prototypes with the intention of cutting costs or simplifying production [...] Sure, I understand their rationale for cost cutting. I can read the Provisional Budget. I know where all of this is coming from. Nevertheless, I am not comfortable when this is done at the expense of our inventiveness and, ultimately, identity. I do not like it when our style is superseded by numbers, when the search for attractiveness and beauty is sacrificed or postponed until the next collection".

During the prototyping phase, a significant number of discussions are centred on trade-offs among the aesthetic aspirations of the stylists, the cost of finalizing a garment, the complexity of production, the ethical concerns, as well as the promises made by sales managers to agents and clients. The interfunctional workgroups enable participants to exchange views and try to find a workable solution. As emphasized by a production manager, "recently, during our weekly meeting, the creative director used a prototype to illustrate the most appropriate combinations of straps, colours and accessories for the next collection. [...] It is always fascinating to listen to

stylists sharing their ideas and discussing their sources of inspiration, however, after few minutes, I could not stop thinking about the production challenges associated with those new creations".

Within the interfunctional workgroups, or even as part of the informal discussions along the corridors of Monnalisa, the Provisional Budget offer inputs and opportunities for conversation and confrontation as the collection develops. "It is like a magnet; it is a tool that attracts everybody's attention", claims a member of the Sales and Marketing Department. "It summarizes the expectations of so many parties who are both internal and external to the company. [...] You look at that sheet and you can picture your boss at the end of the collection period either smiling at you or, well, let's say, giving you hard time". As emphasized by the CFO:

> "The content of the Provisional Budget sustains the conversations and empowers the different parties in practice, offering a base for discussions to reinforce specific points of view and to challenge others. For example, sales revenues often represent a powerful figure, over which the different perspectives between Sales and Marketing, Production and the designers collide. The different views on quantities to be produced per line item and the respective selling prices come to the forefront. I sometimes try to facilitate the discussion by offering middle-ground solutions, but it is not always easy since everybody is coming to the meetings with their homework done, having learned the lessons from previous collections and with pretty solid grounds for their claims [...]".

Monnalisa relies on the Provisional Budget, (as well as on the related Cost Cards), to monitor the variable costs of production and the contribution margin of the multiple garments to be offered within the collection. As illustrated in Figure 3, the manufacturing variable costs for producing, among other items, jackets, dresses or skirts are related to fabrics, accessories and *façonists* (outsourced production). The contribution margins by product type included in the provisional budget represent major cost-driven gates, since only models that meet or get close to the planned level of marginality have the certainty of being "listed" and, therefore, produced and commercialized.

Once the final adjustments and the selections of the models have been made, the development of the collection ends with the *sampling* phase, where multiple sizes of samples for the same article are produced. This activity is complex in that not all the elements of an article grow in the same proportion and in predetermined ways for the development of the different sizes. Once the research, design and development of the collection ends, various samples of the garments are produced and marketed to retailers directly through fashion and trade shows, as well as through independent sales agents. Additional analyses of the contribution margin of the overall collection, and of the different typologies of articles classified by brand, are then undertaken at the end of the sales campaign (contribution margin "as sold") and at the end of the process of distribution to stores and shops (contribution margin "as distributed").

5.3 The making of sustainable collections: the role of accounting and performance measurement

As illustrated in the previous sections, the research, design and development of the collection is characterised by ongoing conversations that make up a process of mediation among

a number of different professionals, interests and concerns. Within this context, the Provisional Budget acquires a central role as it engages professionals with different backgrounds in a dialogue, and offers a space in which the different interests and concerns materialize and get translated into financial terms. Together with other accounting and performance measurement practices, such as Cost Cards and the Balanced Scorecard, the Provisional Budget sustains Monnalisa's decision-making process, which underpins the creation of the collection. In this section we illustrate two examples of this process.

The first example involves the *black and white olive dress* reproduced in the upper section of Figure 4. A designer proudly introduced this dress as an excellent article from a stylistic point of view, but suggested that concerns about the complexity of its production, as well as its overall cost, had potentially threatened its development. In particular, she emphasized:

> "I had to fight hard for this dress. And I believe the overall result could have been even better if they [pointing to the Production Department box in the organizational chart attached to the wall] hadn't convinced me at the last minute to modify a couple of things[11] in the design".

The main issues and grounds for confrontation with production managers were the challenges in the acquisition of the accessories from a particular supplier and, more importantly, the complexity of production. Interestingly, the designer points out the role of the Balanced Scorecard as being an indirect source of tension. In particular, this was because during previous years Production had struggled to maintain a good level of performance in terms of delivery time (see the red indicators displayed in the circle in Figure 5). Therefore, in this collection, production managers took a very conservative attitude, trying to keep the complexity of the supply chain at the very minimum. As claimed by the designer:

> "I am sure you appreciate the beauty of the satin bow on the neck with diamond detailing and the large oval olive print in pearl surrounded by "chic" written in glitter [see Figure 4, point 1 and 2]. Sure, sourcing and production methods might have been simplified and costs could have been reduced if I had eliminated the satin bow or even the oval olive print in pearl, but would I have satisfied my clientele in that way? I believe that sometimes it is better to delay the delivery by a week, but offer what is expected from a brand such as Monnalisa. I guess I did my job by helping creativity triumph over a bunch of indicators that I was not sure were able to satisfy the customer more than I was."

[11] The two changes to the design concerned an accessory and a type of fabric. While the accessory was not included because it added to production complexity, the fabric was questioned in this specific occasion because of the need to clarify the supplier's internal procedures and their adherence to Monnalisa's protocols. This aspect was subsequently cleared and the fabric was eventually used in future collections.

Figure 4 – Examples of creative style and production complexity in Monnalisa

The Balanced Scorecard was introduced to Monnalisa with the intension of reducing conflict, guaranteeing the smooth implementation of operations and improving overall performance. However, as suggested by the CFO:

> "Paradoxically, instead of reducing conflict and managing discussions, the Balanced Scorecard has sustained them. When we introduced it in 2005, the Balanced Scorecard led to greater awareness throughout the company. New opportunities for discussions followed shortly. Suddenly perceptions and expectations were there, on paper, as specific targets to be achieved. They were formalized in a new system where colours were worth more than a thousand words. When performance indicators were red or amber, for many colleagues it meant that there was no additional time to loose. It was a wake-up call for them to stand up and argue for an immediate change, either in the same or the next collection".

Through a number of meetings, the CFO made the rationale for the implementation of the Balanced Scorecard clear. The goal was to provide additional, useful information during the research, design and development of the collection. This was due to the fact that it was impossible for the Provisional Budget to capture all the interrelated aspects that potentially can underpin the making of a *sustainable collection*. At one of these meetings, the founder relied on brand

management as a possible example for illustrating why the Provisional Budget was "necessary but not sufficient".

> "Sustaining our collections over time means careful brand management above all. We shall manage our brand by encouraging our talents, developing relationships with trusted suppliers and commercial partners and, of course, by taking care of the numbers. […] Achieving the numbers in the budget, both in terms of margins and volumes, make us think about the financial feasibility of the garments, but a sustainable collection goes beyond that" (The Founder).

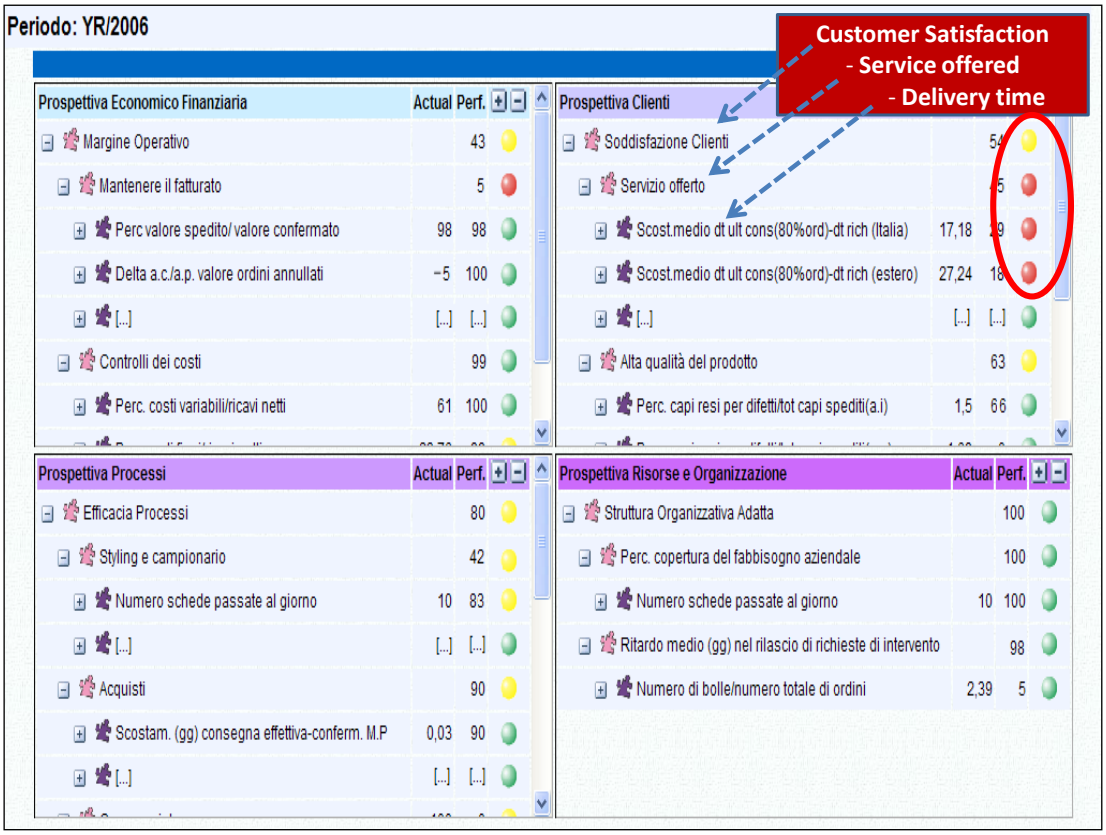

Figure 5 – The Balanced Scorecard in Monnalisa

Therefore, and in spite of the triumph of creativity in the case of the black and white olive dress, the head of the Design Department admitted that often a compromise will need to be reached. In this case, the need for compromise was highlighted by the Balanced Scorecard's red indicators regarding customer satisfaction and delivery time. "Additional production complexity would have threatened the agreed upon dates of delivery to customers [thereby having a negative impact on brand management]", suggested the Production manager, who continued, "and, I am afraid this would have hit not only the performance of our role, but the whole company financially [therefore impacting on the numbers included in the Provisional Budget]". This seems to be acknowledged also by the head of the Design Department, who claimed, "We are not inclined to limit our stylists and look for the middle ground between creativity and efficiency, but in some

cases there are no other options. With the time constraint we have for the development of the collection, concessions become part of the game".

The Provisional Budget offers information regarding the economics of the collection, what the founder referred to as the "financial feasibility of the garments" (as quoted above). However, the projected revenues and contribution margins that featured the conversations around the budget were also affected by issues, such as the delivery time and the conduct of the suppliers, which were not represented in the Provisional Budget. Therefore, as the conversations around the collection unfolded, additional data – in this case the indicators supplemented by the balanced scorecard - were dragged in the process of discovery and questioning that was deeply rooted around the Provisional Budget and the financial summary it offers, in spite of its incompleteness.

An additional, interesting example concerning the role of accounting and performance measurement practices within the process of mediation across functions, which often characterises the creation of a collection in Monnalisa, is offered by the founder, who was called on for arbitration on *the red and white floral dress* reproduced in the lower section of Figure 4. He attended an inter-functional workgroup in which a final decision about this garment needed to be made. Later he stated:

> "When I joined the meeting there was an intense discussion going on regarding this red and white floral dress. I knew the stylists were particularly keen on seeing it on the shelves, since they believed, like I did, that this dress was perfectly in line with Monnalisa's style and customer expectations at the time. However, representatives from Sales and Finance were concerned about the overall cost of the garment, and production managers were apprehensive about the impact of a number of accessories on the management of both internal and external operations with the façonists. Cost and technical cards were constantly referred to in the discussion, with a number of copies of the Provisional Budget for the garment placed in the centre of the table, on top of the prototypes, fabrics and accessories" (the founder).

Cost Cards are financial documents that summarize the total costs of fabric and accessories for each item that is researched, designed and developed (see figure 6). They translate the design features – captured in the technical cards – into financial terms, and contribute to the data necessary for preparing and updating the Provisional Budget. The unit cost of a garment is often compared to previous collections and industry standards. Together with the prototypes and the Provisional Budget itself, Cost Cards stimulate conversations about the multiple possibilities for creating a *sustainable collection.* In this context, they are constantly relied on by the different parties in order to support their views, concerns and the interests that are at stake [see the round shapes in Figure 6].

"As for the red and white floral dress," as recalled by the founder, "it is worthwhile to mention that early in the development of the collection, the stylist was very determined to have a 4 euro belt included in the design of the garment [see Figure 6, point 1]." The CFO then added, "We did not like the idea because the dress was already quite expensive and we believed that the

red check hem and bow [see Figure 4 – point 3] were enough to justify the inclusion of the garment in the *Chic Monnalisa* brand." The CFO continued that, with the help of the founder, a solution was found and the belt was left out of the design and removed from the subsequent versions of the Provisional Budget and Cost Cards. As she explained:

> "The founder and the stylist looked at the numbers in the budget, and challenged their validity. They even [ironically] questioned the inclusion of the garment within the brand *Chic Monnalisa* before realizing, eventually, that there was really no space to add other expensive accessories in this occasion. They were happy with the red check hem and bow [see Figure 6– point 2] and the red grosgrain ribbon waistband as the distinguishing features of the dress. […] However, we knew that this was only a truce, and that the belt that we left out of the dress design on this occasion would come back in future designs. And, it actually did."

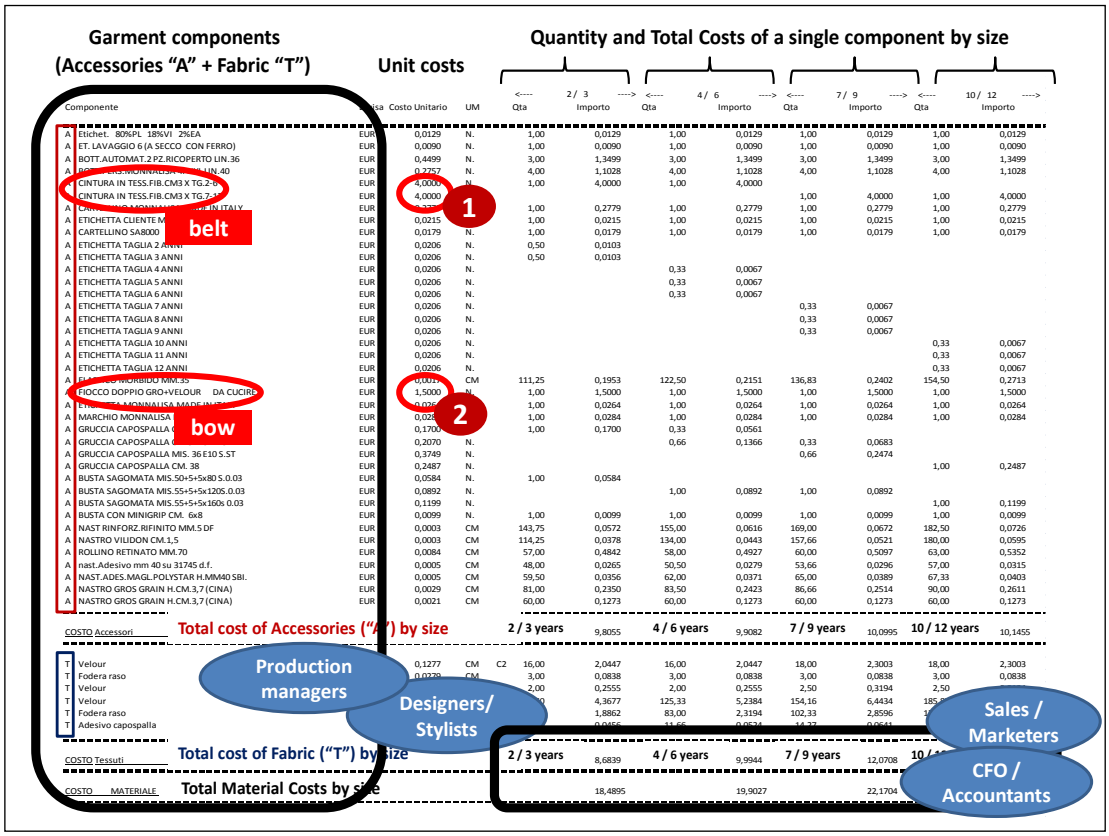

Figure 6 – Example of a Cost Card in Monnalisa

Pointing out the data provided by the Provisional Budget and the Cost Cards, the CFO further elaborated and commented on the example of the red and white floral dress by arguing that the 4 euro belt would have added an unnecessary 15% on top of the existing production cost, therefore reducing the expected contribution margin of the garment considerably (and, therefore, its financial "sustainability"). She also suggested that what was underestimated in the garment's design proposed by the stylist was the impact on production efficiency and the risk of

a missed delivery. The Provisional Budget did not offer all the information needed in order to make an informed decision. “The impact on production complexity from including that type of belt is not featured in the Provisional Budget, which is also failing to capture the potential consequences of missing the agreed delivery times to shops and customers”, suggests the CFO, who also added, “on the other hand the production manager could construct his counter argument on the experience gained from having manufactured similar garments in the past, as well as on the alerting red indicators that are featured in the Balanced Scorecard”.

Nevertheless, the stylist did not let go easily. As explained by the CFO, “the stylist strongly suggested that according to his understanding there was room for increasing the price of the garment, and so she began to question the accuracy of the planned selling price”. Again, the Provisional Budget did not help decision makers much in addressing the issue brought up by the stylist regarding the selling price of each garments because the it does not include justifications for price setting, whereas on the expense side the Cost Card provides full details regarding the cost of accessories and fabric. This gap stimulated a conversation that paid off approximately one year later when the stylist was able to have a similar garment’s proposed price adjusted upwards. This allowed the stylist to fulfil her aspiration and include the same belt with a similar dress, although in a different collection.

In this section we have illustrated Monnalisa’s journey towards the creation of a *sustainable collection*. In particular, we have focused on the process of cross-functional collaboration that characterises the briefing stage, as well as the research, design and development of the collection. The case study provides material for reflection on how the ongoing search for the “perfect one”, by combining both creativity and efficiency, as well ethical and sustainability concerns, is mediated by accounting and performance measurement tools such as the Provisional Budget, Cost Cards and the Balanced Scorecard. These represent practices that participate in the continuous creation, questioning and redefinition of what counts as a *sustainable collection*. In the next section we analyse Monnalisa’s journey of collection creation further, and discuss the role that accounting plays as a Maieutic Machine that is able to sustain invention through generative '*in*-tensions’.

6. Accounting as a *Maieutic Machine*: sustaining inventions through generative '*in*-tensions’

In the previous sections we have presented empirical material from the case study of Monnalisa in order to portray the early phases of the collection (from briefing to sampling) as a ritual that is recurrently and collectively experienced by a number of heterogeneous actors while they engage, collaborate and confront each other in the attempt to create a *sustainable collection* for the market. We have illustrated in detail the multiple views, concerns and interests at stake that affect the underlying intentions of the actors participating in the development of the collection, and determine what a *sustainable collection* actually means to them in practice. As this collective journey unfolds, the aesthetic of the garments, the understanding of the customers’ tastes, the financial return of the collection, the complexity of production, the quality standards of accessories and fabric, as well as the policies and codes of conduct of the suppliers, agents and

retailers offer examples of interests and concerns that are likely to affect the creation of the collection.

6.1 Accounting as "a space for endless possibilities": constructing meanings through questioning

Within the collection ritual, accounting and performance measurement tools, such as the Provisional Budget (see Figure 3), the Balanced Scorecard (Figure 5) and Cost Cards (Figure 6), represent graphical and schematic visualizations that contribute to construct the architecture of a space in which the different participants can perform a compositional work aiming to imagine multiple alternative ways to envisage the collection and search for *their* "perfect one". This compositional work is intrinsically narrative (Czarniawska, 1997) for it enables users to build a plot, i.e. a series of links connecting their views, interests and aspirations, to the diverse artefacts and practices featured in the development of the collection, such as prototypes, technical cards, Provisional Budget, Cost Cards and the like. Therefore, within the collection ritual, accounting and performance measurement reports are not worth so much because of the content they contain, but rather due to the actions they enable and make more concrete by providing a heterogeneous group of participants with ways of defining and establishing logical connections among the various concepts and concerns – whether this regards the aesthetic of the garments, the understanding of the customers' tastes, the financial return of the collection or the complexity of production.

Described previously as a "magnet", the Provisional Budget plays a significant role in the early phases of the collection. Its contribution goes well beyond acting as a boundary object that attracts participants across functions in an ongoing dialogue through both the formal meetings, such as the management committee or the inter-functional workgroups, and informal conversations that feature the creation of the collection. Viewed as a *topica*, the Provisional Budget represents both a method and a material grid of empty cells. It is a method because it offers a way to 'figure out' what topics to discuss regarding the meaning and the creation of *sustainable collections*. It is also a material grid of empty cells (*loci*), which enables the multiple and heterogeneous parties involved (who alternatively act as *orators* convening their view on the garments during the meeting featuring the collection journey) to identify their topics and generate knowledge about *their* view of the "perfect one" without knowing what a *sustainable collections* actually is. The Provisional Budget does so by establishing a relationship between the unknown concept of a *sustainable collection* and the categories offered by the material grid, (such as the number and type of units to be produced, the variable costs for fabric and accessories, the costs associated with the internal and external production phases, as well as the budgeted gross sales revenues, and the contribution margin by collection or by product type), whose cells are to be progressively filled in as the garments materialize progressively.

The construction of meaning of a *sustainable collection* through the Provisional Budget is always latent and fragmented since there is never a full correspondence between the topic (*sustainable collection)* and the *topos* (the Provisional Budget), i.e. between the concept of "the perfect one" and the tools that attempt to help represent it. Searching for *sustainable collections* through accounting practices is, therefore, part of a maieutic process through which meaning and knowledge are constructed through a process that proceeds from what is calculable, known and

visible in the cells of the Provisional Budget or the Cost Cards to questioning the elements that may be difficult to account for, unknown and invisible. This maieutic process operates by asking questions organised along the rhetorical grid and its dimensions, (e.g. What is the cost of the fabrics or accessories? Which stakeholders are affected by a delay in delivery?). Therefore, it is a form of reasoning through analogy (Carruthers, 2015).

This form of reasoning never produced (and could not produce) certainties about the definition for a *sustainable collections* since, in spite of their generative role, Provisional Budgets and Cost Cards always entail an incomplete representation for reflecting about the unknowable. An instance of the generative incompleteness of accounting is offered by the conversations around the *black and white olive dress* where the provisional budget stimulates questions concerning the making of a sustainable collection without offering detailed information on value drivers such as encouragement of talents, development of relationships and strengthening of suppliers and commercial partnerships, which are critical, for example, for brand management purposes.

The Provisional Budget*,* therefore, represents an epistemic object that offers a method and a site "to wander around a space of endless possibilities" (the founder, earlier in the paper), a productive 'vacuum' (Hallett, 2011) in which the different parties engage and create meanings through the uncertain search for the "perfect one", which generates garments that, collection after collection, pose further questions, investigations and, therefore, results in developing knowledge. This is the case of the belt not included in *the red and white floral dress* where the lack of insights on pricing that characterize the Provisional Budget led to question the selling price formulation. This stimulated a conversation that, after one year, had an impact on the decision asking regarding pricing (adjusted upwards) and product development (as the stylists was able to fulfil her aspiration and include the same belt on a similar dress).

But how does accounting participate in this process of knowledge generation? In the next subsection we continue to rely on examples from the case study of Monnaisa to further address this question. In particular, we will illustrate how the different *in-tensions* that underpin the collection ritual are recursively mediated, in practice, by accounting practices that inform the creation of the collection as the participants perform the recurring search for *their* "perfect one".

6.2 Sustaining inventions through the **ductus***: Accounting and the generative 'in-tensions'*

The conversations generated and maintained through the Provisional Budget and Cost Cards are not intended to create shared views and sustain consensus. As noted by the CFO regarding the Balanced Scorecard, "paradoxically, instead of reducing conflict and managing discussions, the Balanced Scorecard has sustained them" (quoted earlier). Accounting and performance measurement practices offered collective spaces in which different concerns, interests and aspirations are voiced and mediated in practice – ultimately, it is a space that sustains informed participation and continuous engagement ("Everybody is coming to the meetings with their homework done, having learned the lessons from previous collections", stated by the CFO, as quoted earlier).

Although the Provisional Budget offers a method and a space for generating a *sustainable collection*, a way towards the "perfect one", it does so by opening up a range of endless

possibilities pointing to multiple directions. It is a tool that attracts the attention of all participants because of its capacity to steer the collection from research to sampling, from an initial open and rich *inventory* of possibilities (represented by the multiple categories and cells of the grid) to a final, supposedly innovative and cost effective, *invention*. And this is what the founder of Monnalisa encourages his staff do when he suggests that "in spite of any possible need for compromising down the line to make the numbers in the budget work, I have always supported provocative ideas in the process, even when I knew it would have been nearly impossible to stick to them" (as quoted earlier in the paper).

In this sense, accounting practices do not define sustainable collections, or what the "perfect one" is but, rather, they are only incomplete – and therefore engaging – representations that act as pathways for performing these definitions through ongoing conversations, questions and debates. They do so through brevity and augmentation. The grid of the Provisional Budget or Cost Cards, for example, provides some simple (*brevis*) but incomplete categorical dimensions, which, by reducing the unknown to known quantifiable categories (such as the 4 euro belt, a bow, or a type of fabric with its associated costs and ethical issues), constitutes the conditions of possibility for questioning the unknown, thus augmenting the perceived knowledge of the *sustainable* collection in the making.

These categories structure the Provisional Budget and the Cost Cards. For example the costs of a specific fabric to be used or a peculiar arrangement with façonists, offer an opportunity to question the information contained in the cells of the budget in order to figure out the unknown, i.e., what it takes for a garment or a collection to be sustainable. The Provisional Budget offers a workable middle ground that both reduces and augments knowledge while constantly maintaining classifications '*in*-tensions' through a maieutic process. In doing so, the maieutic process of *ratiocinatio* is therefore a structured path that works to sustain the search for the "perfect one" by creating a tension among opposites, since there is no *inventio* without *intentio* (Carruthers, 1990).

This structured path resembles the rhetorical figure of the *ductus* (see figure 7), in which the maieutic process is punctuated by certain points (*punctus*) that mark the development of knowledge composition when a multitude of heterogeneous professionals take part in a ritualised process that supports their attempt to generate *their* "perfect one". In Monnalisa, going through the ductus starts before the collection briefing as the founder uses all of his leadership qualities to set up a *burning platform* for stimulating cooperation and confrontation – rather than compromise - across departments and functions (see point A in figure 7). As quoted earlier, he challenges the different participants during the collection journey by adding "fuel to the fire" and "urging" them to come forward with feasible ideas and leave a mark in the creation of the new collection.

The "delicate balancing act" (as described by the founder) that characterises the collection journey, therefore, begins with a clear challenge to be faced: the creation of a *sustainable collection* through cooperation and confrontation. Following this, accounting and performance measurement practices offer professionals from the Design, Sales and Marketing, Production, and Finance departments a method for addressing this challenge. The Provisional Budget, the Balanced Scorecard and Cost Cards provide a generative space in which a number of categories can be drawn upon to make various compositions of opposite visions – such as creativity vs.

efficiency - of what a *sustainable collection* is (see point B in figure 7). This is what the Sales and Marketing manager described when he pointed out that early meetings in the collection are "generally opportunities for intense discussion", during which "it is definitely challenging to reconcile the data we have on spreadsheets with the aspirations of thrilled designers" (as quoted earlier in the paper).

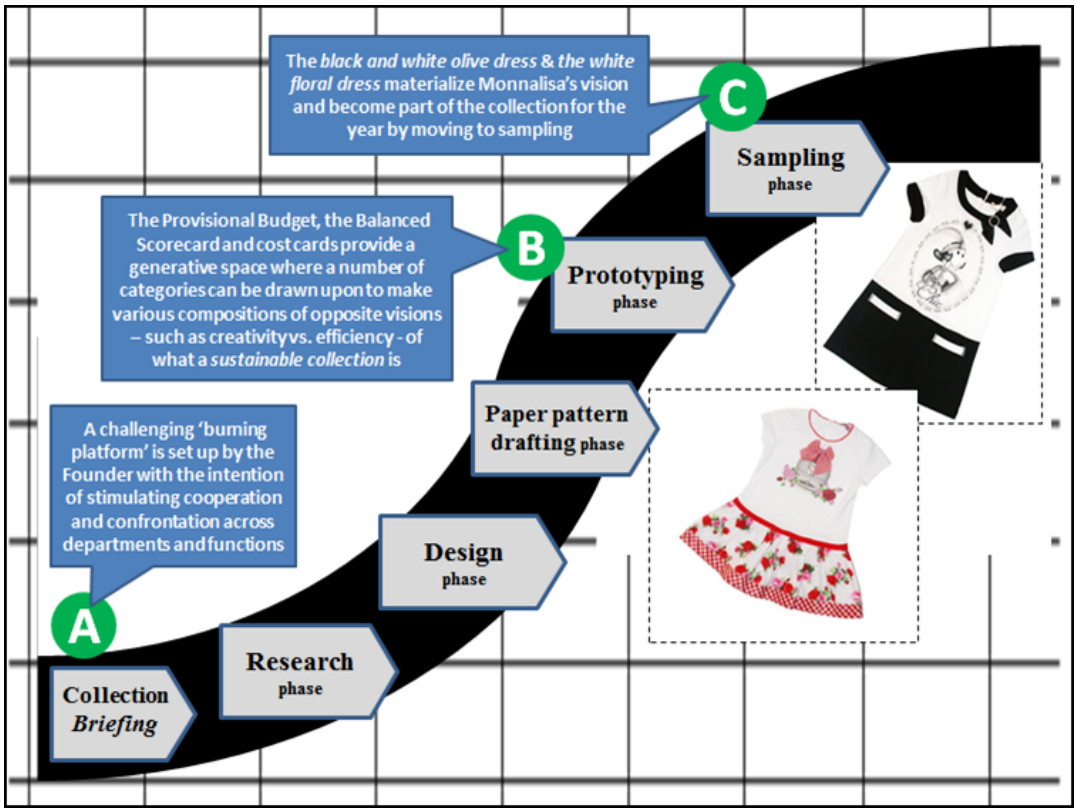

Figure 7 – Going through the ductus: *Accounting, invention and the mediation of 'in-tensions'*

The journey of cooperation and confrontation that characterizes the *ductus,* eventually ends with the possibility of making choices regarding what a sustainable collection actually look like, materialising Monnalisa's vision and the aspirations of designers at least for the current year. Through the *ductus*, the process of mediation, to find a way forward through the multiple views and interests, does not necessarily entail aligning actors around the same perspective, but, instead, seeks to address their concerns by problematizing certainties and engaging the actors in dialogue. This is done through a language of interrogation supported by the Provisional Budget, Cost Cards and the Balanced Scorecard. These accounting and performance measurement practices never lead to a closure. Instead, and also through their incompleteness, they offer mechanisms that generate questions and maintain diversity while, at the same time, offering possibilities for moving forward (Knorr Cetina, 2001).

The examples of the black and white olive dress, as well as the white floral dress are illustrative of this path and progression (see point C in figure 7). Both dresses had proponents and advocates throughout the process. Both were supported and challenged by leveraging accounting

and performance measurement practices during the inter-functional workgroups, as well as during the many informal conversations that feature the collection ritual. At the end, and despite a number of doubts that still persisted about their ability to encompass the vision of a *sustainable collection*, both garments made it successfully to the sampling phase and to the shop shelves, becoming a part of that specific spring/summer collection.

6. Conclusions

This paper has explored how accounting visualizations sustain a continuous process of search for perfection in the context of an Italian mid-size fashion firm. It has done so by investigating the role that incomplete representations such as budgets, cost cards and scorecards play in prompting and sustaining such a search. As a result, we have complemented the literature on epistemic objects (Knorr Cetina, 1997; 1999), which demonstrates how the incompleteness of representations prompts a desire for improvement and perfection, with the literature on visual rhetoric (Barthes, 1970; Carruthers, 1990; 1998; 2015), which shows how this search is sustained thanks to a process of composition that relies on very specific visual and rhetorical figures.

Our paper contributes to the literature on the incompleteness of accounting representations (Quattrone and Hopper, 2005; Wouters and Wilderom, 2008; Jordan and Messner, 2012) by showing the generative power of such incompleteness and by providing theoretical tools to investigate this power. We suggest that accounting visualizations are not worth because of the content they carry (or do not carry). Instead, we argue that their incompleteness carries a generative power that is intrinsic to accounting representations since they cannot epistemologically provide answers through clear numerical calculations (Burchell *et al*., 1980) that construct boundaries for right or wrong courses of action, thus closing the conversation about what count as 'rational' (Quattrone, 2015). Instead, this incompleteness provides a space for both reducing organizational complexity (in order to pragmatically manage it) and expands our knowledge of it through a maieutic process of interrogation.

This process, as we have shown, is articulated through specific rhetorical figures such as the grid (e.g. a budget on an excel sheet) and the *ductus* (i.e. the path of the collection punctuated by accounting calculations) that sustain the search for perfection, despite the fact that it is impossible to achieve. In this sense, accounting goes beyond that constructivist nature which Hines (1985) highlighted in her seminal contribution. Accounting is, instead, maieutic, that is, it prompts and sustains processes of questioning which reach both closure (the accounting visualization through reductionist numerical data) and opening (through the composition that these numbers can generate). For example, in the case of Monnalisa, the accounting reports act as pathways for questioning what counts as the pursuable 'aesthetic value' of the collection without ever leading to the closure of this definition, if not in pragmatic terms (i.e. the collection has to eventually be produced). Such visualizations sustain participants within the search, design and development of the collection and enable them as they act in a collective ritual that offers endless possibilities for the multiple concerns and interests that are at stake. This heterogeneity leaves gaps and, consequently, scope for further action and engagement of users, whose purposes are always multiple and, therefore, always '*in-tensions*'.

Accounting plays an important role in this process since it operates as a rhetorical *ductus*, i.e., it designs a collective path that is made up of clear methodological features (e.g. the dimensions of the grid that frame the budget of the collection), which engage users in a collective effort to construct visions that are, however, never fully realized. It also prompts a continuous mediation of different interests and concerns across professional boundaries in a recursive process that continuously questions such knowledge, meanings and interests.

The findings of this paper have implications for further research into the role of accounting visualization in the formation and sustainment of visions and beliefs (Boedker and Chua, forthcoming). If these visualizations have the power to make "people do things" (Latour, 1987), it is important to understand not only how they engage the user (Knorr Cetina, 1997) but also how this engagement is sustained outside of contextual, functional and rational explanations that posit this sustainability in abstract spaces, such as 'society', in difficult to grasp entities such as 'purposes', or fictitious dreams such as 'utility'. We believe that, outside any remnant of positive rationalism, there is an unexplored space where beliefs need to be further explored, thanks to the tools that have created such beliefs for centuries. This space is populated by disciplines and practices such as rhetoric, theology and the social studies of religion and divinity (Quattrone, 2015). If accounting is the space in which the god of capitalism, (i.e. profit), was made visible and then was ready to be praised, accounting has to do with religion as much as with economics. We hope this paper takes a step towards the exploration of this new territory.

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