



# Basic Research in Art: Foundational Problems in Fashion Design Explored through the Art Itself

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## **Abstract**

This paper explores foundational problems in art and design in order to understand the theoretical levels of art as a practice where art is understood as the function of *technê* and *mimesis* in an Aristotelian sense. This definition of art is here used as the principal category for design. As an alternative to applied research in art and design, e.g. through integrative studies of social science, the aim of the paper is to present basic research problems and principle research results in art based on examples from fashion design relating to issues of body, dress and space. The motive for the exploration is to develop art and design as a particular

and independent field of practice in the sense of art research resulting in theoretic propositional knowledge for its own domain through the finite formation of concrete material itself (e.g. acts and artifacts). As such the aim of the paper is neither to continue to expand on the past fifty years of design science, nor is it to develop new perspectives on the past two centuries of developments in aesthetics as a social construct. Instead the aim is to explore fundamental principle issues that are overlooked in the dominant theoretic discourse in fashion design as an art form independently from notions on design science (methodology) and socially constructed aesthetics (contexts).

In order to explore and define a number of fundamental principle issues in art and design a number of contemporary and historical works in clothing and fashion design that concern the functional and expressional relationship between body and dress are explored from fundamental ontological and logical perspectives. Some of these examples are more particular to fashion design (e.g. exploring definitions of garments or developments of new constructions systems for new expressions), while others are more general to expressional issues in relation to body and dress (e.g. exploring form, material and substance, structural principles or systems interaction in relation to body and dress). Together, they indicate principle research issues in art that are necessary for the theoretic development for the field itself as an academic discipline.

As an alternative to art and design research outcomes in the form of descriptive and generalizing aesthetic contextualizations, and independently from validating design methods, the paper demonstrates both the possibility and the significance of constructing formal, syntactic and logic in art and design for the field's own theoretic development. Moreover the ontological and logical challenges explored also demonstrate the importance of basic research in art and design in order to explore and define fundamental a priori principles, models and methods to develop the different fields of art and design themselves, instead of merely using processes and artifacts of art and design to supplement research which is primarily for the benefit of other academic fields.

**KEYWORDS:** art, design, basic research, ontology, logic

## **Introduction: Applied Research in Fashion Design**

As it is the concern of many disciplines, from chemistry to philosophy, from sculpture to anthropology, from psychology to economy, dress is both *physiká* and *metá-physiká*: it is both garment and fashion. However, although dress is an ambiguous concept that attracts interest from many different academic disciplines, when it comes to inquiries into the expressional qualities of dress, its particular form and material, the main body of research is conducted from a dominant perspective. For

example, in sociology the expressional properties of dress, commonly defined as “fashion,” understood as a form of unplanned change in expression against a backdrop of order, and as such contrasted to function (Aspers and Godart 2013), are mainly understood as an expression of social conditions and relationships such as imitation and distinction (cf. Bourdieu 1994; Goffman 1959; Mandeville 1924; Simmel 1904); a dynamic perspective which seems very difficult to challenge even in today’s contemporary understanding of the expression, or fashion of dress (cf. Breward 1995; Bovone and González 2012; Feinberg *et al.* 1992; Polhemus 1994; Roach-Higgins and Eicher 1992). In cultural studies, however, this concept of fashion as a social expression of human conditions and phenomena, is arguably understood as a more dynamic concept, as a means of cultural constructions, of e.g. nationality, class, gender, subcultures, and other aspects of globalization and cultural life (cf. Craik 1994; Wilson 1985). But even if fashion has been understood as a more ambiguous agency and politicized function of expression, it is still strongly conceptually linked with developments in sociology, putting a strong emphasis on the communicative aspects of expression in dress and its potential for explicit dialogue (cf. Kaiser 2012; Peirson-Smith 2013; Steele 1996). Following the fundamental notions of fashion in sociology and cultural studies, economic theories on the expressional qualities of dress mainly emphasize the symbolic values of dress as symbols of personal distinction and interaction where cultural capital is transformed into an alchemic hierarchy of economic value (cf. Bourdieu 1984; Marx 1986; Veblen 1899). Thus, again, symbolic and structuralist perspectives on the expressional value of fashion design objects seem difficult to challenge as they are found to still dominate the theoretical essence of contemporary research in the expressional quality of dress (cf. Berger and Ward 2010; Breward 2003; Bruzzi and Church Gibson 2000; Ma *et al.* 2012; Kawamura 2004). In other words, theories concerned with the expressional qualities of dress are today predominantly concerned with dress as a linguistic system from different communicative aspects of culture and economy and more or less influenced or in close relationship to the structuralist systems proposed by Roland Barthes (1983).

With such a dominant linguistic perspective in the understanding of fashion as the expressional qualities of garments, it may not be surprising that, over recent decades, when art and design schools have sought to legitimize fashion design as an academic field in its own right, it is these linguistic perspectives on art and design (borrowed from humanities and social science) that have come to influence the understanding of theory in the establishment of fashion design research.

Hence, in respect to fashion design as a field of art itself the theoretical development of fashion design as a body of knowledge through the design object has equally followed the aesthetic-linguistic development of art in general (cf. Skjold 2008), and as such, has placed the theory

of dress making (the art form) outside of dress, a relationship similar to the one existing between art and art history. Thus, instead of dealing with the concrete construction of physical acts and artifacts that engage with the material world or even ones that reject that concrete material reality (cf. Harman 2002; Paraskos and Head 2008), art research has come to mean different versions of new-media-social-science-works (cf. Barone and Eisner 2011; Leavy 2009) where particular forms of art, such as fashion design, are utilized as an alternative media to “point out” and “shed light” on different humanistic concepts and conditions (cf. Beecroft and Beccaria 2004; Kent and Shonibare 2008). Here, particularly expressive fashion design projects serve to illustrate or discuss various humanistic concepts and conditions of fashion as a cultural expression rather than to construct and develop new propositional knowledge in the field of fashion design as field of art. In a research school context a few more examples may serve to illustrate the point. For example in Shaw’s (2009) research in seamless knitting, where data was collected from museum collections of seamless garments, it is the narrative of landscape and heritage of particular fishing communities that is the focus of a classic “inspired” design project resulting in a collection of garments rather than the exploration of the aesthetic potential of new knitting technology that could be visible in the resulting artifacts. As such the project is rather an exploration of a particular design culture around craft instead of an exploration that develops craft techniques and design expression itself. Another similar example of research is Eriksson’s (2009) work “Concrete Fashion,” where classic garment archetypes are applied as input to discuss identity and civil engagement in public space from a literary and art history perspective, instead of for example developing new types of clothing for the construction of different identities and forms of engagement. A third example of research which seemingly appears to be a practice-based research into patternmaking is Townsend and Mills’ (2013) work on zero-waste patternmaking. However, instead of developing alternative pattern-cutting systems for “more creative pattern cutting” based on less waste, as the title claims, the work discusses the ideas of “mastery” in relation to experiential knowledge and “newness” in design. A final example of practice-based research that focuses rather on the communication and context of dress and costume is the works by Bugg (2009, 2011). In her works the understanding of costumes by different audiences are analyzed, as well as the emotional associations and retelling of embodied experience by the wearers instead of focusing primarily on the development of dress or costume itself. Consequently, instead of being used to deal with the fundamental development of the field of art itself, i.e. issues of an ontological and logical nature, the acts performed or artifacts created by different research projects are used as integrative accessories in cultural and textual analyses performed in principally different academic subjects.

As important as applied research in the fine arts may be for the development of different humanistic issues this particular focus neglects the development of art as a science in itself. Here, the process and result of fashion design are reduced to applied tools for other academic fields, where the outcome is instead the expansion of other academic fields. Needless to say, such a dominant focus on applied research in art and fashion design at a large scale is problematic from an expressional point of view, because it means that the otherwise so statuesque fine arts and the field of fashion design have come to engage predominantly in narrations and representations of different issues instead of being concerned with what is crucial for the development of the field, i.e. its own theoretical development. In conclusion this development in art research has come to reinforce a highly questionable academic division between theory and practice, while it at the same time has made the fine arts become the applied arts in the service of other fields.

### **Basic Research in Art and Design**

Instead of different forms of applied research where art and design artifacts are used as communicative accessories in research for the development of an essentially different field, basic research in dress is about exploring the expressive potential of dress through fundamental relationships between form and material, between technique and expression. Instead of promoting empirical research resulting in verifiable representations, a basic research perspective—in e.g. fashion design—suggests change and development through proposing new foundational definitions and theoretical propositions within the particular field of art itself (cf. Hallnäs 2010). Consequently, the crucial question facing an art form such as fashion design does not relate to the formal differences between art and science, but rather to how art is science or how practical research is theoretical research? In other words, what are the basic ontological and logical problems in fashion design (art) as a fundamental science?

To explore such fundamental ontological and logical issues in fashion design in particular, and in art in general, I will also use rather fundamental definitions of theory and art. First, theory will be used in the sense of the construction of formal, syntactic, and logic principles rather than contemplative, descriptive, and contextualizing generalizations of a phenomenon. Second, art—as the general category for fashion design as a discipline—will be used and understood as the function of *technê and mimesis* in the sense of technique (principle) and expression (selective active presentation) (cf. Aristotle 1984a). Based on these definitions, I will look at a series of works that concern different aspects of fashion design to show demonstrate different basic theoretic problems of art as a discipline in and for itself, and as such an alternative to the

applied problems fashion design research. Without aiming to make a complete overview of the ontological and logical challenges, I will only draft some aspects of ontological and logical problems to articulate the fundamental importance of basic research in an art form; at the same time I will indicate possible ways of how such problems may be explored in and through the art form itself through concrete design work.

However, the main aim is not to validate the results of any of the examples through contemplation or contextualizing, but instead to use the examples to demonstrate basic theoretic problems of formal, syntactic, and principle characteristics of fashion design and how such problems may be approached. Hence, the methods for developing the propositions that these examples present are of no scientific interest in terms of validation, and will also not be discussed as such, because the methods used in developing the propositions in the examples are all forms of experimentation in the sense of testing and trying. And such an experimental approach to research for finding and developing new principles (cf. Bacon 1990; Pointcaré 2010) is not to be confused with experimentation as a method for validating, which of course, however, might come at a later stage for the test and adjustment of the fit and function of the proposed models.

## **Ontological Challenges in Fashion Design**

Ontology concerns the nature of being and becoming, and the entities that may be said to exist or not. Thus ontological issues are about fundamental categories of form, substance, matter, subject, and their relationship to each other (cf. Aristotle 1984b). Hence, ontology is also about the organization, hierarchy, and division of fundamental entities of existence and reality in the broadest sense, but equally about the organization of, and relationship between, fundamental entities in particular knowledge domains. From the perspective of an art form such as fashion design, the ontological problems are therefore about when something is, or is becoming, e.g. a dress, a garment, a coat, a seam, a pocket, a fashion, etc. But it also concerns the relationship between such entities and definitions. Fundamental questions to ask may therefore be: What is the definition of dress? What is the condition of dress? What is the relationship between form and matter in dress? What is the identity of a garment? What is the difference between garments categories? Into what hierarchy should they be sorted? Even broader questions might be: What is the relationship between body and a garment? What is the relationship between body, dress, and space?

In other words, ontological challenges in fashion design concern the basic relationship between form and matter, matter and substance, subject and substance, and other primary categories and definitions in fashion design and dress making.

### **Body, Movement, and Expression**

Derived from the general questions above, a fundamental challenge in fashion design is the movement of the body, both from an expressive and a functional point of view. This does not only involve the question of how garments may affect and induce a certain movement, but also the reverse one, i.e. how dress may articulate and express a certain movement. An example of the latter is found in a work with a particular focus on the expression of the body in motion: the *Danse Serpentine* from 1891 by Loie Fuller. Fuller explored the new expressions in dance through technical innovations in costume, movement, and lighting. Through improvisational dance techniques using vast veils of silk, animated by using long sticks as extension of her arms, together with a complex use of mirrors and light, Fuller developed a new choreography that transformed the total expression of her dance (Garellick 2007). From a theoretical point of view, the use of a certain kind of stick or a certain silk fabric in any particular color does not constitute the primary contribution of her work. Rather, the principal contribution was the newfound way of amplifying the moving body, which provides dance with a new expressive potential.

As a comparative example to the above examples of research in the expressional potential of the human body, but instead in a more everyday construction of dress, the textile and garment work by Mariano Fortuny also illustrates basic research and development in the relationship between body and dress. In contrast to the corseted female body that was popular in Fortuny's Europe, Fortuny explored pleating techniques in silk weighted down by glass beads in order to transform the expression of the female body (cf. De Osma 1980). Instead of compressing the torso with a corset construction and adding different ornamentation to the body, Fortuny based his new construction, the *Delphos dress*, on unstructured pleated silk fabric hung from the shoulder that allowed the dress to flow freely around different bodylines. The function and expression of the pleated construction, which was derived from an ancient Greek dress, as Fortuny's naming of the dress suggests, is only loosely controlled by adjustable drawstrings for fit and the attached glass beads for drape, which together respond to each particular body in a liberated yet controlled expression through Fortuny's construction.

### **Body and Space**

If Fuller's work focused on the relationship between body, textile, and movement, Oskar Schlemmer's *Das Triadische Ballett* from 1922 is a somewhat similar research work, as it stems from an equally fundamental ontological perspective on body and dress. However, instead of looking at body, textile, and movement, his exploratory work investigated the relationship between body, dress, and space. To examine bodily movement in space, Schlemmer started by transforming the body through different wearable objects in order to geometrically abstract the

human figure into an artificial gestalt. Then, by adding music and movement, he attempted to synthesize human Dionysian impulsiveness and vitality with Apollonian precision and mechanical reasoning through a choreographed geometry. The work is separated into three parts, where the first is set against a lemon yellow background, the second against a pink background, and the third against a black background (cf. Schlemmer 2003; Schlemmer *et al.* 1994). Again, the principal contribution of Schlemmer's work, as with Fuller's, is a set of particular forms or materials created by the abstracted relationship between the body, dress, and its environment.

As another example of concrete research into the relationship between body, dress, and space the *Parangolés* by Hélio Oiticica may serve as an example. While following De Stijl and the concrete art movement, Hélio Oiticica explored three-dimensional (3D) color construction through concrete environmental works. One of these works, conducted in 1964–8, is the *Parangolés*, a series of works that explore circumstantial bodily and environmental interaction through different body-art-works. In an attempt to explore and alter peoples' sense of reality, Oiticica used geometric shapes and sheets of block-colored fabrics to emphasize animated and collective movement in order to transform the interaction between the body and its environment (cf. Figueiredo *et al.* 2007). In relation to this, Chalayan's work *Afterword* from 2000 may be understood as an exploration between dress and the built environment. The work, made by Hussein Chalayan in collaboration with Paul Topen, examines the foundations of dress as an integral, mobile part of space. Through a staged performance, in which a few performers dress themselves in furniture made of multiple materials such as wood, metal, and fabric, the work examines and also proposes a particular metamorphosis between garments, accessories, interiors, and furniture (Chalayan 2011).

### **Form and Matter**

Another basic ontological problem is the relationship between form and matter and how a particular substance is created by having universal matter take on form (cf. Aristotle 1984b). Concerning dress, this may be expressed as any unstructured matter taking on the form of dress in some kind of relation to a body that together are meant to embody a particular substance, i.e. its expressional property. One basic example of this is the work by Ina Hjelte (2012) (Figure 1), where the principle question is how the structure of a textile relates to, and transforms, into the structure of a garment by experimenting with different ways of cutting into the material and the ways in which it then relates to the body as well as the surrounding space.

Furthermore, in fashion design, the archetypes of dress possess a powerful influence on the development of clothing. Looking at developments in fashion design, it seems virtually impossible to break from

**Figure 1**

Ina Hjelte. Course work.



archetypes such as T-shirt, jeans, skirt, trench coat, jacket, sweater, etc. Yet experimental exploration and challenging of foundational definitions and archetypes is as vital to the development of fashion design as it is to the development of any other field. A work that explores definitions in fashion design is that performed by Larsen (2013), who investigates the fundamental definition of dress. Through a series of experiments performed with basic materials and naive shapes, his work examines the interactive properties of garments with the aim of inventing alternative methods for developing new types of garments for new ways of wearing and performing (Figure 2). From the perspective of fashion design, Erwin Wurm's *Rote Pullover* may also be used to exemplify fundamental research into the archetypes of garments. In a series of experiments, the work breaks down given definitions of garments through its dynamic interaction with the body. As such, it presents an alternative perspective on a particular garment and its relationship to the body while, at the same time, questioning the existing definitions of different garments (Wurm *et al.* 2004).

**Figure 2**

Ulrik Martin Larsen, 2011.  
Screenshot, experiment 1 from  
a series of 7.

A third example, this time found in the ready-to-wear collection by Raf Simons for Jil Sander in 2010, may also serve to illustrate principle research work into the fundamental problems of form, matter, and substance for the development of new expressions of dress. In this work, Simons may be said to have explored Jil Sander's earlier notion of minimalism in her fashion design (cf. Blanks 2010). Through the concrete practical study of straight and sharp lines, contrasting volumes, solid block colors, and enlarged decors in relation to the body, the work explores, in a concrete way, Sander's principles (theory of design) in relation to the contemporary expression in the high-end ready-to-wear fashion design field, as an altogether different backdrop (paradigm) than the one many years before. As such, the work explores the formal principle of matter in its simplest and scarcest form in order to achieve a certain substance. That is, the relationship between form and matter in the expression and function of dress may be exemplified through the textile as a loose material, a garment as a form, and the total expression of form and matter as the substance.

### **Matter and Substance**

If the above examples illustrate basic research in the relationship between form and matter from a form perspective then the works by Lucy McRae and Bart Hess exemplify basic research into form and matter from a material point of view. In their work Lucy McRae and Bart Hess (McRae and Hess 2012) explore the human character (substance) through physical experiments with the body and different organic and inorganic materials by giving it different forms. For example, in "Germination" (2008), sausage forms were created by pantyhose stuffed with sawdust, which then were covered in grass seeds and left in a pool with water for a number of days until the growing material (grass) gradually transformed the form of the worn artifact (dress), while in "Grow on You" (2007) they explored the expressive potential of colored foam on

the body. In the later project, “Skin Machine” (2010), McRae herself together with Mike Pelletier this time explored the expression of nature and technology through dynamic, liquid skins that cross the body by liquid and pressurized air.

In terms of exploring the expressive potential of material one might also mention the range of interactive textile-related projects or wearables, where the potential of new and emerging technology in garments or as forms of garments are explored. One such project is for example Berzowska and Laflamme’s (2011) PLEET project, where they investigate the aesthetic potential of integrated luminous textiles beyond “the realm of dance clubs and rave culture.” As such the project by Berzowska and Laflamme and the projects by Lucy McRae and Bart Hess touch upon one of the more fundamental research questions, which is about the aesthetic potential of material in relation to body and dress, may it be concrete prosthetics for human enhancement, or not.

However, the exploration of expressive qualities in materials does not need to take such vivid forms as the above. Much of industry research in the expressive qualities of material in clothing is for example made when alternative material is developed to replace existing ones but with the requirement that the appearances should be the same. The search for replacing cotton with more sustainable fibers, but still with the expressive and functional qualities of cotton is a typical example of such basic research. Another example is IKEA’s research with weavers to produce replacement textiles with the same quality in terms of feel and drape as existing ones, but with the new ones only using 85 percent of the raw material (personal communication, interview with Joachim Lindqvist, IKEA, Textile Division, September 2, 2013).

### **Logical Challenges in Fashion Design**

Logic could be explained as the system or principles of reasoning and the study of inference, where formal logic is a principle abstracted from any particular application, matter, or phenomenon as such (Aristotle 1984c). From this perspective logical inquiries concern the exploration of inferential systems themselves on a universal level in relation to particular entities. For fashion design this means that logical challenges concern the formal inference and syllogism in constructing and establishing different categories and entities in fashion design and dress making. This implies asking questions about the technique, working methods, systems, processes, manner, etc. in relation to the formal expression (argumentation and rhetoric) of the resulting artifacts. From this perspective, some basic questions of formal logic may be: What is the formal relationship between the technique and methods of making and the expressional qualities of the result? What is the universal way of a particular method? What constitutes valid reasoning in a design

process? What are the relationships between events and elements in a method and how do these relate to the whole process and its predictability? What are the formal features of the representations of a design process? What are the relationships between proposition and form of design object? What is a logical vocabulary of sketching as a formal language? What are the formal methods of representing and documenting the reasons behind design decisions? Overall, this is to say that formal logical explorations in an art form are matters of studying and constructing meta-theory for the particular field itself.

### **A Priori and Pre-models**

One of the purposes of a logical inquiry is to study a priori knowledge, ways of reasoning, or normative structures that are taken for granted. One such obvious form of a priori structure in fashion design is the tailor's mannequin. As a basis of construction, a tailor's mannequin is often an unquestioned a priori model and pre-model for design development and the further sculpturing of the body. On the one hand, the "neutral" qualities, i.e. its formalized size and appearance, of the pre-model in the form of a traditional tailor's mannequin suggest blandness and impartiality. On the other hand, the freedom that may characterize it is deeply rooted in a certain idealized form of function and necessity. Consequently, there is in a particular tailor's mannequin both a resistance to transformation brought about by its physicality and an openness to new development because of its abstract nature and disability for closure (cf. Thornquist 2009). Thus, as a model of the human body and a pre-model for application and development in dress, the abstracted qualities of a tailor's mannequin need to be reconceived—or changed into a completely new model—in order to open up new possible expressions and functions in garment design.

In relation to fundamental approximations and models of the body, it is also interesting from the point of view of fashion design to look at the sculptural works by Antony Gormley (2011) as a concrete way of proposing different theoretical perspectives on man's being in the world. For example, in the sculpture series *FEELING MATERIAL*, *PROPOSE*, and *PACK*, Gormley explores the possibilities and limits of the human space in space, where particular series of experiments with form explore different and particular matters of human space in concrete mechanical rhythms and repetitions across its systematic potential. In this way, Gormley deconstructs the human body and its energies and abstracts from it new and different approximations—models—of the body's relationship in the three axes of the built world, which in themselves may form the basis for further 3D work in relation to the body.

### **Approximations and Principles**

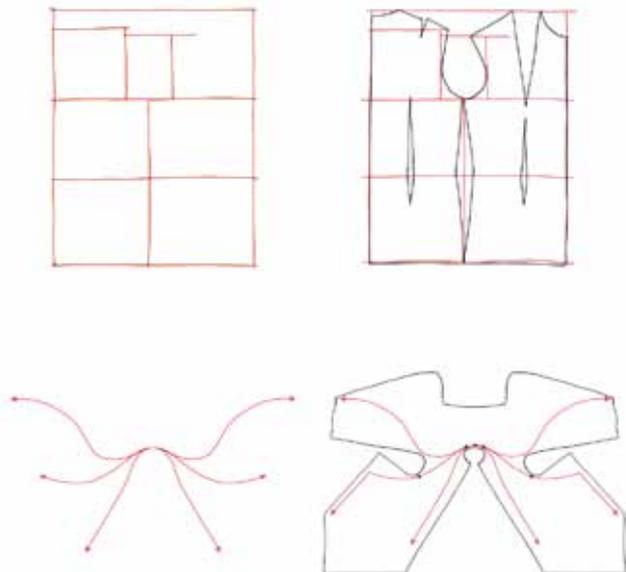
It is, however, not only the tailor's mannequin that could be challenged as a particular approximation of the body. Most construction systems

and patternmaking methods for garment design are also based upon different approximations of the body. While traditional numeric patternmaking systems assume a static position for the dressed body, motion is among the factors that cause clothing pressure to increase significantly. Based on this hypothesis, Simoes (2013) has researched the representation of the moving body, questioning this predominant static representation of the body that is taken as the base for developing traditional numeric pattern-cutting systems. In order to explore and propose a different approximation of the body in a concrete way, Simoes created multiple sets of the same generic garments (trousers and top) based on traditional block patterns in woven textiles with significant plastic qualities which then were worn by six different people. The average of the distorted outlines from the original garment shape (deviation), which occurred after the test person's wearing, was then traced and presented as an alternative approximation for new constructions systems.

On a similar note, but not only presenting an alternative approximation of the body, Lindqvist's (2013) work explores and proposes an alternative construction system based on an alternative qualitative approximation of the body instead of the usual quantitative one. As such, the work aims to identify fundamental principles in order to create alternative expressions and functions. Instead of a static matrix of a non-moving body, the proposed model for cutting garments is based on a qualitative approximation of the body visualized through balance, lines, and key biomechanical points (Figure 3). Through concrete physical experimentation on the body, instead of following preconceived ideas regarding professional fashion design trends concerning pattern

**Figure 3**

Rickard Lindqvist, 2011.  
Traditional (top) and alternative (below) approximation of the body and corresponding logic of pattern construction.



construction or academic teaching in patternmaking, fundamental principles of a construction system were constructed based on a different approximation of the body.

### **Technique and Expression**

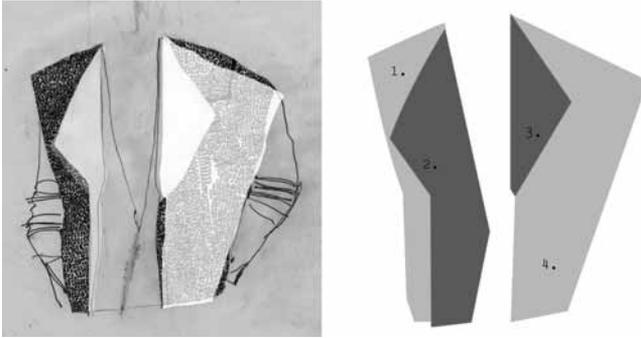
From a logical perspective, the formal relationship between a technique or method and the expressional qualities of its result is of fundamental importance in an art discipline. If not already safe to assume at once, one needs only to ask a few teachers of design method in order to conclude that working, for example, purely with front and back flat pencil sketches, rapid prototyping in small scale with e.g. fabrics on a small puppet, or developing only with a dummy that has no head, arms, and legs, will influence the expressional quality of the design result in terms of differences in the emphasis, order, weight, etc. in form, matter, and body. Put differently, it means that when starting a design process in order to compose a garment from a (loose) material, the material may determine the overall behaviors of the garment. For example, if one starts with a very coarse, heavy, and stiff raw material, the blunt properties and weighty dynamics of such material will influence and perhaps even dominate many of the different forms into which the material may be shaped or forced. Thus, the material already embodies a certain form, or potential for form. On the other hand, if starting a design process with a form, this form may instead determine the nature and role of the garment, as e.g. a particular archetype that is recognized as belonging to a particular category or sort, which in itself may dominate many different materials that so to speak fill in the form. Thus, here again, the basic philosophical question about fundamental relationships between form, matter, and substance shows a central problem in art and design, which for example is also recognized in the basic design courses at Bauhaus (Lupton and Miller 1993). As a consequence, issues of formal logic concern not only the form of the object or the potential form in the material, but also the form of the method applied in the exploration and development of materials. In their modules, order, emphasis, and tools, the different formal structures of design methods also affect the form of the result. Altogether, for art in general as for fashion design in particular, formal analyses of causal relationships between method and results are therefore an obvious problem area to explore and develop.

A typical example of research in fashion design exploring the relationship between the form of the method and the form of the result is whole-garment pleating by Miyake (1999), where whole-garment pleating techniques are explored in order to propose new expressive and experiential possibilities in dress and its relationship to the body. The result is a new generic method and model in fashion design based on a certain combinations of textile and garment techniques for new expressions in dress. The principal result of the work is therefore not a particular dress or jacket in a certain color or shape. The theoretical

result is the principle of the method: a model to be applied and further developed. In relation to this a fundamental question in basic art research is thus the aesthetic potential in a given technique, such as, for example, what are the expressional possibilities with a particular knitting machine for fashion design? Similar, but perhaps less explored, are issues connected with the expressional possibilities with 3D printing in fashion design.

To further highlight the problem between methods and results one may also look at the influence of Maison Martin Margiela (2008) on academic teachings and professional design work over the past ten years or so and in particular a method of deconstruction that is commonly ascribed to him. While Margiela on the one hand has been understood to have laid bare the “secrets” of the fashion design process and brought modern art into fashion (Maison Martin Margiela 2008; Vinken 2005), it appears that academic teachings in fashion design and professional design work through deconstruction commonly content themselves with applying a certain style of deconstruction to things, a deconstructed look, instead of utilizing a general principle of deconstruction. That is, the everyday meaning of deconstruction in fashion design refers to an applied deconstructive style rather than an analytical principle in the sense Heidegger (1962) uses in *Destruktion—Abbau*, as a form of exploration that takes different forms depending on the artifact or phenomenon analyzed for the purpose of laying bare its partial elements or categories, or understanding its essential structure or function. Hence, an inquiry into deconstruction as a fashion design methodology beyond the taken-for-granted meaning and expression may be valuable.

Returning, to the first example of sketching, which in art and design is a common method to communicate and reason, it is as such a form of natural language with similar function to natural spoken or written language. However, there is more than one natural language of sketching and just as with other natural spoken and written languages there are varieties and, within them, different dialects and styles. Hence, similar to the view on natural spoken and written languages as complex and ambiguous, sketching is perhaps even more criticized for being vague and multifaceted. And although one would agree that declarative compositions (sentences) in sketching (natural language) also have underlying logical forms, one main problem remains, namely the relationship between sketching as a natural language and sketching as a formal language. An example of research that explores one aspect of this problem is the work by Blomgren (2013). Through a series of sketches and experiments with garments based on different construction techniques, Blomgren tries to study, identify, and abstract possible logical forms and declarative propositions (properties) for the formulation of garments from a seemingly ambiguous and vague sketched natural language (Figure 4). Another aspect of formal language of exploration regards situations where the purpose of sketching is to analyze and

**Figure 4**

Erika Blomgren. Course work.

represent the form of a valid argument. For example, in art and design work, argumentation is often done in a visual workbook based on photography, sketching, and collage work. As such, the work aims to make its content valid as a formal inference arguing for the logic of a construction model in a formal grammar and symbolism through a deductive and demonstrative representative pattern. In relation to this a basic research question is therefore how to develop and organize workbooks from methodological and epistemological perspectives through visual experimentation with different forms and matter of workbooks.

## Conclusion

Drawing on a classic understanding of art as the functional relationship between *technê* and *mimesis* rather than art as a text, postmodern irony, critique, or other concept detached from physical acts, while exploring theoretical issues of art, where theory is understood as the construction of formal and syntactic principles rather than contemplative and descriptive generalizations, the above examples demonstrate fundamental ontological and logical dimensions of art, here exemplified by basic theoretic problems in the expressive relationship between body and dress. First, in contrast to views on art and fashion design as non-theoretical practice (cf. Skjold 2008), the examples and problems above demonstrate the reverse: the principal ontological and logical level of art itself and how it may be researched in a concrete way. For example, the methodological research in patternmaking by Lindqvist (2013) based on new approximations of the body are comparable to how a neurologist would develop new clinical methods based on new understandings of the human body. Similarly, the research of foundational definitions of dress by Larsen (2013) to develop our understanding of garments and their hierarchy may be compared to research for developing definitions and hierarchies in biology, in order to find new perspectives on functions and developments in a particular area.

Second, for research perspectives in art and design that question perceived technical issues as not artistic issues, and instead favor narrative and hermeneutic work mainly for the advancement of other academic disciplines (cf. Barone and Eisner 2011; Leavy 2009), it is instead such technical issues, as demonstrated in the examples of Fuller (Garelick, 2007) or Fortuny (De Osmá 1980), that are the foundational issues of fine art: the principles (theories) of the relationships between technique and expression. Ironically, it seems that much has already been forgotten about the range of technical developments in fine art throughout history that have advanced the field. For example consider the development of cubist techniques in painting by Picasso and Braque. As not so much a style, but rather as method and perspective through, for example, Cézanne's geometric solids, cubism does not primarily present new motives in paintings but possibilities to understand and express already everyday motives in new ways (cf. Antliff and Leighton 2008). As such, cubism presents painting with a new model, a new grammar—*new formal methods*—for new possible expressions in painting and the advancement of visual arts in general. The invention of abstraction in art is yet another example (Affron *et al.* 2013). In another field and at a later date, in the area of product and industrial design at Bauhaus, the explorative approach to functional and expressive material possibilities in art and design, Marcel Breuer in his Model B3 chair explored the expressive and manufacturing potential of bent tubular steel and canvas, which drew on new techniques to create seamless steel tubing (von Vegesack and Remmele 2012). As such, Breuer's work presented new principles for new expressions in product design that, just as Picasso and Braque did, contributed to a model and base for a school of thought in art and design. In architecture, a third and more recent example of similar principle research and development of new techniques for new expressions may be Peter Rice's explorations of the expressive potential of glass as a structure in architecture (Brown 2001; Rice 1998). To advance material expressions in architecture, Rice developed new generic construction methods that allowed new possible expressions in built environments, focusing on the honesty and immediacy of principal materials such as glass and its structural potential for increased tactile qualities in architecture.

In other words, looking at the examples related to fashion design in the article and the comparative example above, formal and material issues may neither be dismissed for issues that merely concerns another epistemological field outside of art, nor should formal and material issues of technical principles be overlooked for what they actually are: foundational definitions and models. Consequently, basic research in art, or "practice based design research," is no less theoretic than other research when it comes to the construction of formal syntactic principles and foundational definitions; nor is research in art through art any more practical than research in other fields—if one only manages to

acknowledge the actual process of practically and physically moving, changing, adjusting, etc.—*composing*—symbols and words into a text that motivates, explores, and formulates contemplative and contextualizing generalizations.

Moreover, instead of focusing on, for example, sculpting narratives on different humanistic problems with an impressionist technique, basic research in art focuses on developing new schools in painting—a new *-ism*—that enriches the field with new and alternative methods and medias that enables an even better understanding and exploration of different humanistic problems. As such, basic art research primarily concerns concepts and theories, because its purpose is to construct theoretical knowledge in abstract models and methods for new expressional and aesthetic possibilities. The outcome or answers to the questions above are not functional or applied in any way; they are theoretical frameworks and principles to be applied. Therefore, these questions present the most foundational level of an art form, the principles of a discipline that define the very possibilities and limits of applied works in art, such as narratives and interpretations of different humanistic issues through the particular art form. Thus, instead of divorcing art and science, and instead of art being a pleasurable or disagreeable irony, “critically” pointing out an idea in an act of interpretive conceptual Duchampism, basic art research serves the fundamental role of a sensible, experimental way of developing new knowledge.

All this is nevertheless not to deny that applied and research may result in foundational development of the art itself. Applied research may obviously drive foundational theoretic development. For example, to explore a certain social or political problem through fashion design and dress, some foundational ontological and logical dimensions of the art form may need to be developed. One may, for example, think of this as when new words and grammar in a formal language first need to be developed in order to make it possible to explore a particular issue from a different perspective. Thus, the need to understand and express an issue that is a main concern of another academic field may also be the motive and inspiration for a basic research in the art; however, the actual foundational development of the art discipline is the construction of definitions and models for the theoretic advancement of the field itself. Nevertheless, the crucial ontological and logical aspects of an art form presented here demonstrate the “pure” aspects of any art: basic research in art, defined as the foundational development of the art for the sake of the art itself.

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