The only question is how anything works, *with its intensities, flows, processes, partial objects* - none of which mean anything.

Félix Guattari¹

Fashion branding largely succeeds in arousing a desire for the clothes we think we lack for an upcoming party, public appearances or the coming new season, for instance. As was argued in the previous chapter, this results in fast fashion being a disposable fashion which, in turn, leads to an enormous pressure on our environment both at the beginning of the production chain by claiming resources as well as at the end by having to deal with disposal of the items of clothing, which largely end up in landfills.² In addition, fashion’s lifestyle branding is a representational practice that encourages us to view ourselves as brands that can be represented through adopting the brands’ identities for self-representation. As I argued, following Deleuze, fashion’s overcoding representational practices lead to false depths (Deleuze 2004 [1968]: 67).

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¹ Guattari in Gilles Deleuze’s *Negotiations 1972 - 1990* (1995: 22), original emphasis.

Viewing fashion through a prism of representation and identification, in other words, ultimately contributes to it being regarded as a shallow and superficial practice, in which ephemeral overconsumption results in serious or even disastrous environmental and ethical problems.

Common solutions to the problems we are faced with regarding fashion and consumption rely heavily on creating public awareness for the downsides, such as making exploitation of workers visible, and emphasising the urgency with which we need to start thinking about the strains that are being made on the environment (SOMO and ICN 2014; Greenpeace 2012). The attempts to make consumers value their clothing more by carefully considering the way they are produced hence encouraging more responsible actions seem of insufficient impact. Primark’s profits, for instance, rose with thirty per cent during 2014, H&M is the first fast fashion brand in Forbes’ list of the world’s most valuable brands, and ZARA, H&M and C&A are expanding their activities to the Brazilian market. In relation to the latter the following words by Paolo Borges, founder and artistic director of Brazilian Fashion Week, are telling: “Fast fashion is a process which allows a greater number of consumers to satisfy their fashion desires. Brazil is 10 years behind in terms of consumption, as compared with international markets. It will continue to buy a lot more.” Buying more may boost economies, but it must also be directly linked to more CO2 emissions, more wastewater pollution, more unethical methods of production, and an increasingly unequal distribution of wealth (Klein 2014, SOMO 2014, Greenpeace 2012).

It can be argued that due to different powers, groups and interests involved, an agreement of how to solve the potentially disastrous destructions that must be related to fashion remains out of reach. Collective action can be said to remain paralysed since the perspectives of the different parties involved differ greatly. The fashion industry

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and economy are focused on growth and increase of sales; consumers demand cheap items of clothing to communicate their being; scientists are focussed on the collecting of data; and politicians are driven by political principles, elections and reaching consensus. One may conclude that the drives and motives of the parties involved differ too greatly to result in united actions. Dutch scholar Arjen Kleinherenbrink writes that a common reaction to the frustrations of not undertaking any actions towards climate change and environmental problems is the wish for one powerful actor that will decide what actions need to be undertaken (Kleinherenbrink 2014: 12). He also argues that Deleuze would suggest the opposite: rather than appointing one overarching power all the different perspectives can also be regarded for their problematic overcoding practices, which in turn can be taken out of the equation. Capital, identity, political power, and representation can then be regarded as secondary processes that obscure a perspective upon the multitude of connections that precede these overcoded perspectives. Furthermore, the relations and processes between the different practices, the ways in which specific problems are coded, transformed, and communicated can then be examined and exemplified for a change to come into effect (Ibid.).

In this chapter I therefore suggest examining Deleuze’s concept of assemblage (agencement) in relation to the production, wearing and discarding of a pair of jeans. Furthermore, I propose that viewing fashion through a concept of assemblage may direct one towards unravelling how new fashion realities, new forms and materials, may be invented. As Kleinherenbrink emphasises, inspired by the last sentence and word of A Thousand Plateaus: ‘Mechanosphere’, Deleuze’s philosophy enables a thinking in which all processes and forces involved can be related to one another, rather than seeking for one essential and decisive structure (Kleinherenbrink 2014: 7). Adopting such a perspective would enable a heterogenetic analysis in which the encounters of the

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5 It needs to be mentioned here that the ‘lines’ (rigid, supple, flight) as described in Chapter 3, “function[ing] in the assemblages of which they form part” (Deleuze & Parnet 1987 [1977]: 128). For reasons of clarity, however, I have decided to treat the concept of ‘lines’ and that of the assemblages they form separately. In this chapter I will focus upon the latter.
multiple elements that are involved, the territories they encounter, and the transitions and transformations that occur are taken into account, rather than focussing on one of the involved perspectives above all others (Kleinherenbrink 2014: 7; Deleuze 2007 [1993]: 361). Executing such a heterogenetic analysis will enable me to research fashion for all forces and processes involved in what we wear and thereafter, which has been my aim from the start of this dissertation.

One of the overcodings I have examined in the previous chapter was that of fashion’s preoccupancy with representation of identity. Apart from the fashion industry reinforcing and as such overcoding this idea, one may also question our own relationship with the clothes we wear as such an overcoding of identity. French philosopher Olivier Assouly, for instance, has argued that the fashion industry, whether it entails fast fashion or luxury products, encourages consumption through increasing the renewal of aesthetic factors. Fast fashion brands do so by renewing their collections as frequently as once every two weeks, luxury fashion brands do so by means of extending the products they sell under the brand’s name for a larger public. This mechanism may be economically efficient, but on the other hand, as Assouly points out, it causes the relationship with the fashion product to become ephemeral which in turn contributes to more waste (Assouly 2007: 16). We have a desire to shop for subjectivity and we do so when we are introduced to new products and trends, which are in fact only variations of existing styles. The value we give to these products diminishes when we are introduced to yet newer products that arouse our desires, and disposing of the ‘old’ products becomes facile.

Assouly ends his text by posing the question how fashion can gain responsibility, but leaves this question unanswered (Assouly 2007: 16). I would like to suggest that apart from distinguishing the forces and processes involved in fashion, we may begin by examining the concept of ‘desire’. Assouly emphasises that a desire to consume is always present in a latent manner, but it is only truly aroused when we are faced with new aesthetic forms. How can we then look upon desire in a new way so that it does not necessarily lead to thoughtless consumption of renewed aesthetic forms? Which other potential encounters with fashion may then come to the fore, and how may these alter the homogeneous looks, the production of waste, and the exploitation of workers we are faced with.
today?

Elizabeth Wilson emphasised that “fashion, the child of capitalism, has, like capitalism, a double face” (Wilson 2003 [1985]: 13). She identified the ambiguous and paradoxical characteristics of fashion in relation to capitalism of which the paradox of the capacity to create and that of wastefulness is one (Wilson 2003 [1985]: 15). In this chapter, I will examine both the creative and the wasteful aspects of fashion and propose that Deleuze’s heterogeneous perspective of productive assemblages may very well reveal the scope of fashion’s problems and offer an analysis of where new expressions and materials in fashion can be detected. Apart from the ecological problems one must associate with the current ways of producing and consuming items of clothing, one may question to what extent fashion’s creative potential is explored in a society where individuals increasingly look alike. The global expansion of fast fashion as well as cheaper extensions of luxury brands further contribute to the homogenisation of looks. As creativity drifts out of sight, wastefulness and unethical practices fill our horizon fuelled by corporate profit over people and the planet. Is this what we desire?

Deleuze’s Desire

In *L’Abécédaire de Gilles Deleuze*, a French television program produced by Pierre-André Boutang between 1988 and 1989 and broadcast by Arte after Deleuze’s death in 1996, Claire Parnet interviews Deleuze and does so, as the title suggests, by posing questions about his philosophical concepts in alphabetical order. During the episode titled *D comme Désir* (‘D’ for desire) Deleuze says that “in desiring an object, a dress for example, the desire is not for the object, but for the whole context, the aggregate […] the aggregate of the skirt, of a sun ray, of a street, of a woman, of a vista, of a colour.” What makes us want to purchase and

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6 See, for instance: http://www.youtube.com/watch?v=IrZdOZzr4as, accessed November 2014, or Charles Stivale’s written summary through: http://www.langlab.wayne.edu/cstivale/d-g/abc1.html
wear a dress or skirt is, according to Deleuze, not solely found in the object itself. We imagine wearing it on a sunny day, in public, and picture the colours of the dress interacting with the sunlight, the other colours present, our moving body, and the movement of the dress. Deleuze thus emphasises how body, dress, street, colours, movement, and more connect and work together to produce what he and Félix Guattari name intensities rather than representations (Deleuze and Guattari 2004 [1972]: 270). The multiplicity of intensive connections that can be detected whilst imagining wearing a dress is what is desired, apart from what the dress may signify or represent.

An intensive desire hence is always ambiguous, experimental and productive, and changes when an element of the aggregate changes, such as the sun disappearing, for instance (Deleuze and Guattari 2004 [1972]: 172). Extensive desires, such as the significations and representations with which fashion brands overcode items of clothing are extensions of dress that may change but still appear determined and are regarded as being representational at a certain time and place. As examined in the previous chapter, one is encouraged to focus upon a desire for overcoded, identity shaping qualities in clothing, whilst when actually wearing an item of clothing much more than representation and identity comes into play. For instance, we may remember what we wore during our graduation ceremony, who were present, what the weather was like, how the outfit influenced posture and movement, and how the day was experienced. These intensive factors can all be connected to the outfit as well as to each other. Had it rained, would one of your parents have been late, would you have worn something different; all these little events would change the way the intense day was experienced.

In Anti-Oedipus, the first volume of Capitalism and Schizophrenia (2004 [1972]), Deleuze and Guattari describe how, ever since Plato and culminating in Freud’s theory of the unconscious, desire is experienced as a lack. Whereas for Freud desire is essentially negative (we desire an item of clothing that is absent) and as such exemplary for the relation between a desiring subject and a desired object, Deleuze and Guattari’s concept of desire is affirmative, productive, and a-subjective: “[d]esire does not lack anything; it does not lack its object. It is rather the subject that is missing in desire, or desire that lacks a fixed subject” (2004 [1972]: 28). Desire, as Deleuze and Guattari suggest it, is productive through its potential
to connect what they name ‘flows and partial objects’ such as colour, sunlight, wind, a piece of skin showing, sounds, fabric moving, et cetera. Or as they write: “Desire constantly couples continuous flows and partial objects that are by nature fragmentary and fragmented” (2004 [1972]: 6 [emphasis added]). Hence desire is not representational, nor is it fundamentally human; it is, as Claire Colebrook wrote, “just the creative striving of life in general” (Colebrook 2002: 99). A sunflower turning its head to absorb the sunlight, a bee visiting a flower for pollen, and a virus encountering its host and eventually possibly killing it, are all desires.

Whilst comparing Deleuze and Guattari’s positive and productive concept of desire to the desires fashion brands arouse, it can be noted that the latter are essentially Freudian or psychoanalytic desires, in which there is a desiring subject (the consumer) and a desired object (the item of clothing), which is lacked. It is a desire that may be regarded as being a fabricated fantasy expressed by the fashion industry in which our desire is directed towards, and translated into, images and representations that become the objects of desire. Whereas for Deleuze and Guattari desire is productive, the fashion industry reduces production “to mere fantasy production, production of expression” (2004 [1972]: 62). This is a production that produces nothing new and relies heavily on images, identity, and representations. It is a desire that is essentially human, rather than a potential connection of all living, and to some extent non-living, entities. “Desire”, Deleuze writes, “never needs interpreting, it is it which experiments” and it is through experiment that new connections, new ways of thinking, and new manners of analysing become possible (Deleuze [2007] 1993: 136).

For Deleuze desire “only exists when assembled or machined. You cannot grasp or conceive of a desire outside a determinate assemblage” (1993: 36). Hence, before introducing new ways of viewing fashion and its experimenting desires, the concepts of agencement (assemblage) and machinique (machinic) require examination. Apart from attempting to analyse the potential connections between our body and fashion that precede a perspective of representation, what fashion may do before an identity is prescribed to either the wearer or the item of clothing is of importance. The question then becomes: What may be said about the connections that are being made between the body and the fabric before signification of identity takes place? Apart from subjective
experiences that can be related to cloth or clothing – often invested with representatives – one can also focus upon the a-subjective qualities of the materiality and functionality of the connections between clothing and the body. Such a perspective may lead to finding more innovative tools for fashion analysis, since it explores a field that underlies representation. In this chapter I will therefore concentrate on creating materialistic mappings of bodily and textile agents in connection.

Denim – the material jeans are made of – may show how one can examine the status and theoretical implications of researching embedded and embodied relations we have with clothing. Being the most ubiquitous item of clothing around these days, jeans make a case that helps to overcome subjective interpretations and inter-subjective classifications. As scholars Daniel Miller and Sophie Woodward state:

Jeans are a quintessential example of material culture. [...] They are about the least identifying form of appearance available to us today. They are not objects that represent subjects.
(Miller and Woodward 2011:19)

The non-representative character of jeans allows me to focus on the territories where denim and skin, denim and body movement, denim and flesh meet. It is this in-between area of the material of denim and the material of the body where connections are being made and it is where I seek to uncover potential alternative functions and expressions of fashion.

In order to move beyond overcoded identifying and representational perspectives, I will in this chapter focus on the encounter of jeans with Deleuze’s concept of assemblaged or machined desire. As emphasised in the previous chapters, Deleuze is wary of a Platonic grounding of any entity, including human beings, as being One. His is a philosophy of multiplicities and movement in which human beings are of no more principal importance than, for instance, insects. Guattari’s words presented at the start of this chapter illustrate the fact that these philosophers are not predominantly interested in a meaning that can be represented; their focus lies in how things work, how they are organised, and what happens when they encounter each other. It is this perspective on materiality, functioning, and connections that may lead to opening
up a new way of thinking about what fashion may do and express. Looking at fashion through such a prism enables one to emphasise which encounters take place, and which connections are made and undone to connect elsewhere.

Apart from focussing upon fashion’s transformative and experimental qualities, a perspective upon connections that can be related to fashion also includes those connections that are being made before one can put on a pair of jeans. I will therefore, in the second half of this chapter, examine the production process of cotton from plant to jeans and all the connections that are being made between cotton, chemicals, pesticides, water, and workers. By extending the perspective of what fashion may do to what happens before it can do anything in connection with a human body, I will show that such a perspective enables one to think about what it may do in all instances. I hence argue that we cannot regard what fashion may do for us, without including how it may affect others and the environment.

Since most human beings have a habitual tendency to think of themselves as representing an ongoing unity of personhood I see the need to first carefully build up an analysis that takes us from the common connections that occur between humans and clothing to the more complex and molecular connections that can be examined with the aid of a thorough understanding of Deleuze and Guattari’s concept of assemblage. I therefore ask the reader to follow me on a path that leaves behind our ‘selves’ and leads us to focus on infinitesimal encounters between fabric and flesh.

**Contextualising Fashion**

This morning I put on a pair of Lee jeans. It is to be a day behind my desk writing, revising, and thinking about this text. I may rush out to clear my mind and run an errand, but otherwise the day will be mainly spent indoors. I definitely did not think about what to wear; the pair of jeans was still in the bathroom from last night and will perfectly suit my activities for today. I may even put them on again tomorrow when I am lecturing a class. They are respectable enough to wear to work and by no means look like they need a wash. As anthropologist Sophie Woodward
indicated, jeans function as comfortable ‘default wear’ (2005; 2007). When I do not want (or have no time) to think about getting dressed, I turn to jeans. A few weeks ago, however, I was busy with so many things I almost forgot that I was expected at an official celebration at the university. I just made it in time, but had not found the opportunity to change into something that would suit the occasion better than my jeans. As a result I felt underdressed and uncomfortable in the situation I was in. Even if there may have been others wearing jeans and nobody commented on me doing so, it just did not feel right.

The situation described above may lead one to think about what is suitable attire for different public occasions, personal shame and the way we relate to others. However, rather than thinking about the way human beings adjust their style of clothing to apparent standards, guiding codes and the situations they find themselves in, one may also examine the perspectives one can adopt when reflecting upon the contexts in which clothes are worn. On the one hand, one can think about the meaning of wearing a pair of jeans in specific situations and come to the conclusion that wearing jeans is regarded as normal behaviour in some, but not in other contexts. On the other hand, one can think about the relationships between the pair of jeans, the (body of the) wearer, the situation she finds herself in, the onlooker, the weather and many more possible contexts and connections that are of interest if one wants to examine the complex relationships between human beings and the item of clothing one is presented with.

In following this more complex notion of productive connections that can be considered when thinking of the possible relations between a body, its surroundings and garments worn, further examining Deleuze and Guattari’s concept of assemblage may prove productive (2004 [1980]: 554-556). In the common use of the word an assemblage can be regarded as a whole created from heterogeneous parts. A dress, for instance, is assembled when the pieces of a particular pattern are sewn together. Yet, as is the case with many of their terms, Deleuze and Guattari use the concept of assemblage in a specific sense. Although an assemblage is regarded as “a multiplicity which is made up of many heterogeneous terms [and] which establishes liaisons, relations between them, across ages, sexes, and reigns” (Deleuze & Parnet 1987 [1977]: 69), they also emphasise the fact that assemblages are never to be regarded
as static facts. It is thus not the finished dress sewn from the parts of a pattern, but rather the process of sewing and fitting together, which they call an assemblage. Or put differently: “[a]n assemblage is not a set of predetermined parts [...] that are then put together in order or into a already-conceived structure” (Wise 2005: 77). Hence the example of an assembled dress from pieces of a predetermined pattern does not provide us with an adequate example to grasp the Deleuzeoguattarian concept of assemblage.

In his chapter on Deleuze’s concept of assemblage in Gilles Deleuze Key Concepts scholar J. Macgregor Wise analyses the common (or traditional) perspectives one may adopt when thinking about the connections that are being made between humans and objects (2005: 77-87). Although Wise is interested in a better understanding of the relation between the technological and the human, his analysis also proves to be insightful to understand the connections that are made between clothing and human beings. When looking at the relation between mobile devices and human beings, for instance, Wise argues that the relation has often been posed in an unproductive and overly simple manner. He illustrates this issue by describing the three most common views on these relations, taking the mobile phone as an example: the received view of culture, the contextual view of culture, and the view of articulation (2005: 81). I suggest following these three perspectives, yet I will replace the example of the mobile phone by that of a pair of jeans. Similar to mobile phones, jeans may be seen as ubiquitous objects in relation to humans: “outside of the admittedly rather large exceptions of China and South Asia, on any given day, nearly half the world’s population is wearing blue jeans” (Miller 2010: 415). Jeans, as mentioned, function as default clothing; they serve as a safe alternative and antidote to anxieties that may arise when making a more varied clothing choice (Miller 2010: 420). The combination of these two aspects – its ubiquity and default status – makes denim more comparable to a technology such as the mobile phone than any other item of clothing. I therefore propose following Wise closely in order to distinguish common connections from encounters in assemblage.
Received and Contextual Views of Culture and Clothing

The first and most common relation between humans and objects, which Wise calls the *received view of culture*, “posits the human and the object as specific things that are completely different and that could act on one another” (2005: 81). According to this view, one may actually be wearing a pair of jeans but they are still regarded as being external to, and non-dependent of, the wearer. A specific pair of jeans is then viewed as being exactly that: an item of clothing that may be studied regardless of the one who is wearing it. In this perspective jeans and humans are separate entities: jeans are not human and humans are not jeans. Wise notes that this received view of culture and technology leads to debates between technological determinists – who believe technologies are controlling human beings – and social determinists – who favour the idea that human beings control technologies (Wise 2005: 81). In a similar vein, one could say that adopting a received view of culture and clothing leads to the debates between those who consider people that purchase a lot of clothing ‘fashion victims’ and those who prefer calling them ‘fashionistas’. Or put differently, it leads to a debate between those who favour Veblen’s theory of fashion as ‘conspicuous waste’ and dismiss its qualities, and those who adhere to Wilson’s idea of fashion as meaningful performative play (Veblen [2007] 1899; Wilson [2003] 1985).

If one were to study a pair of jeans from this received perspective, one would, for instance, study the development of jeans and the transformations they have undergone: from work wear, to symbolising youth and Americanism, to finally signifying a state of ordinariness. In this sense one might even speak of the ‘evolution’ of both the signification and the shape of jeans. From the same received perspective one could also study the impacts and effects of jeans on society, such as the revenues made per brand; the economic benefits for a city housing a large number of denim brands; or the average number of jeans people possess. Whether one focuses on the development and transformation of jeans or on the impacts and effects that may be related to them, the received perspective views a pair of jeans as a discrete object – it remains a separate entity that can be studied in isolation.

Wise’s second perspective to distinguish the different ways in which one may view the relations between humans and objects, the *contextual*
view of culture, entails the need to examine objects such as the mobile phone or, in this case items of clothing, in their context. With regard to the mobile phone Wise notes the importance that is reserved for examining the way communication devices are embedded in personal lives. When adopting this perspective the focus will be put on the way mobile phones are being used and both capacitate and constrain human action. In a similar vein, one can say that clothing cannot be separated from its context, and also capacitates and constrains human action. Clothing is created, bought and worn by human beings and as such always relates to a human body in a particular context. We cannot then consider an item of clothing in isolation; it is always in use in context somewhere. Sociologist Joanne Entwistle adopts this perspective in her examination of fashion as embodied practice (2001: 33-58). In this perspective a pair of jeans is to be studied in its local and immediate presence and related to the body of the wearer, rather than regarded as a discrete entity.

Anthropologists Daniel Miller and Sophie Woodward also adopt a contextual view in their ethnographic study of people wearing blue jeans in North London (2010). In this study they try to understand an individual’s life history as seen through his or her relationship with denim, and they randomly select three streets in North London to represent the people of contemporary London. They thus study jeans in their specific local presence on these streets, in which the three streets represent the context of where and when the jeans are being worn and studied. In addition, they focus on the ethnographic aspects of this context and discover that the “the population of these streets is highly dispersed in origin, with people from West Africa to Latvia, from Croatia to China and the Caribbean, as well as from different parts of the United Kingdom” (2010: 421). By relating the wearing of blue jeans to the specific ethnographic aspects of the wearer, they relate the item of clothing to the social body and identity of the wearer and, furthermore, embed the blue jeans in the specific time and place they are being worn. Hence questions regarding who is wearing the jeans, when and for what purpose are not answered in an abstract or general manner, but attention is paid to the actual use and situation in which denim is worn.

In addition, the fact that human beings and jeans constrain each other is taken into account: there are no three-legged jeans around, since the human body only has two legs, and once somebody is wearing a pair of jeans he or she is not likely to be wearing another pair of trousers also.

Returning to and following Wise’s critique of common perspectives, one can criticise the contextual perspective because although it does relate an item of clothing to the way it is being worn (its use), the body of the wearer and the social situations it is being worn in, the item of clothing is still being treated as a singular entity. The pair of jeans “that was not a part of the context was introduced to the context and is now used in this context” (Wise 2005: 83). In other words, a pair of jeans is something that can be embodied and embedded in a particular context, but it can also be disembodied or disembedded from its context. Entwistle, for instance, reveals that she views dress in a contextual manner when she writes that “what a woman wears is still a manner of greater moral concern than what a man wears” (Entwistle 2001: 29). In this sense the contextual approach still “posits human beings and items of clothing as separate and unique” (Wise 2005: 82). And since we are solely in search of the connections between the body and the jeans – regardless of whether this body may be male or female in principle – the fact that the pair of jeans may be studied differently when worn by a man than by a woman does not overcome a perspective in which unique entities are studied in separation.

Articulation in Relation to Culture and Clothing

Wise’s third approach is that of ‘articulation’. In following Stuart Hall’s use of the concept of articulation Wise argues that “[t]he concept of articulation is the idea that different elements can be connected (articulated) or disconnected in order to create unities or identities” (2005: 83). Hall explains the term ‘articulation’ and uses the example of an ‘articulated lorry’ (quoted below) as an example of his concept. I will, however, relate it to instances of articulation that can be found when trying on a pair of jeans. Thereafter I will return to Wise’s critique of – and addition to – Hall’s concept of articulation to specify the important characteristics for developing a productive perspective upon jeans in
articulation.

Hall illustrates his ideas of how one may envisage an articulation as follows:

... a lorry where the front (cab) and back (trailer) can, but need not necessarily, be connected to one another. The two parts are connected to each other, but through a specific linkage, that can be broken. An articulation is thus the form of the connection that can make a unity of two different elements, under certain conditions. It is a linkage which is not necessary, determined, absolute and essential for all time. You have to ask, under what circumstances can a connection be forged or made? So the so-called ‘unity’ of a discourse is really the articulation of different, distinct elements which can be rearticulated in different ways because they have no necessary ‘belongingness’.

(Stuart Hall 1996 [1986]: 141)

If one is to relate Hall’s ‘articulated truck’ example to the wearing of clothes, one can imagine a human body and a pair of jeans as two different elements that can be, but not necessarily are, connected to one another. When shopping for a pair of jeans one is likely to try on several pairs, every pair providing the consumer with a new connection. The connection itself – whether it is between a cab and a trailer or between a human body and jeans – is not precisely the articulation Hall speaks of. It is not difficult to imagine that trying on a pair of jeans creates a connection between a human body and the pair of jeans, but what does the articulation of this connection entail?

Hall writes that in order to find the articulation, one is to examine the ‘specific linkage’ between the human body and the pair of jeans, that is “the form of the connection that can make a unity of two different elements”, and one must question “under which circumstances a connection can be forged or made” (1996 [1986]: 141 [emphasis added]). In other words, an articulation is the connection that is presented to us as a unifying form in combination with the context – circumstances – in which the connection is being made. If one now looks for the articulation that occurs when the connection between the body and the jeans is being made, a whole range of related aspects surface. The unifying form of the connection brings the fit of the pair of jeans into mind: in order to make
a sound connection, the pair of jeans must be the right size for the body it is connecting with. But there is more than mere fitting that comes to the fore here; a pair of jeans may be of the right size, but may still not ‘feel right’ for the wearer. Such a non-unifying, and thus unsuccessful, connection may be related to a range of attitudes and feelings towards clothing: the denim ‘not feeling comfortable’; a brand one does not wish to relate to; details such as industrially evoked wear and tear or stitching that are regarded as being ‘unfit’; or finding the cut of the jeans unflattering. If one then focuses on the context in which the jeans are tried on – and takes into account that both connection and context constitute an articulation – the range of possible questions one can phrase becomes even larger. Even though I do not want explore these in detail here, since Hall’s concept of articulation is only leading us up to Wise’s critique and addition, a few examples will clarify the questions that can now be posed. One may, for instance, study whether the same pair of jeans tried on in a small boutique, at a market, or in a large department store evokes the same articulations. Or one may question the influence of the weather, the current trends, the shop assistant, the other customers and many more contextual factors on whether or not a connection is successfully articulated.

Wise critiques Hall’s illustration and example of articulation since it does not overcome the problem that occurred while adopting a contextual view (Wise’s second perspective). When a disconnection occurs, the item of clothing and the wearer can once again be seen as separate entities that may be studied in isolation. And even if all emphasis were placed on the articulation (connection), one is faced with the problem Jennifer Slack reveals in her response to Hall when she states that “multiple researchers would probably define the relevant context quite differently” (1989: 329, in: Wise 2005). Crucial to the concept of articulation, according to Wise and Slack, then becomes regarding the context as being constitutive of the item of clothing and vice versa. In this perspective any study of clothing starts with posing questions about the context in which a connection is being made. To put it differently, an item of clothing can be disembodied (one can take a pair of jeans off) but not disembedded from its context. Hence the embeddedness of clothing within the model of articulation means that an item of clothing is always regarded as being in a context, whether this is a shop, a closet, worn on a body in a specific
An articulation, furthermore, presents us with “complex connections of elements that are themselves articulations. These elements [...] might be social practices, discursive statements, ideological positions, social forces or social groups... The unities they form can be made up of any combination of elements” (Slack 1989: 331). Thus, an articulation is not only a connection of which the context is constitutive, but also a connection that is contingent on time and place. We may study the articulation of a certain item of clothing in a certain shop at a certain moment in history and find different outcomes than when the same item is being studied in the context of a different shop in a different time. In addition, one may now take into account the more complex social practices, forces, groups as well as discursive statements and ideological positions mentioned by Slack in the quotation above. Moreover, one may realise that articulations are not passive situations; connections between objects and ideas are actively made or broken and to do so power is required.

Returning to the example of the ethnographic study by Woodward and Miller (2010), in which certain non-branded, cheap pairs of denim were related to the specific group of migrants found on the streets of North London, it is significant that the concept of power will designate certain articulations as being of greater importance than others. For instance, Miller and Woodward found that the migrants of the three North London streets have a tendency to want to overcome identity markers that clothing may signify:

In this struggle against identity, perhaps one of the migrants’ most valuable allies is denim blue jeans. This is because blue jeans have become perhaps the first ever postsemiotic garment, in the sense of marking nothing other than their own ordinariness, which corresponds to some ideal of the global ecumene.

(Miller 2010: 421)

Blue jeans hence have become a powerful tool for immigrants who wish to transcend identity. They are then to be seen as the articulation of a ‘comfortable state of ordinariness’ empowered by the choice to blend in with the crowd that provides the immigrants of North London
with “a sense of having achieved the inconspicuous, unobtrusive, and unremarkable that attracts no unwanted gaze when a person just becomes one of a crowd” (Miller 2010: 424). This articulation is, of course, a particular one. And even if the majority of the jeans worn in North London articulate a wish to overcome unhindered identity marking, there remain a vast number of jeans that may articulate stylishness, wealth or status, and by doing so form rather different articulations.

Studying blue jeans within the context of Wise’s perspective of articulation raises many complex questions, quite different from the ones that were posed within the context of the received or contextual perspective. Apart from studying the articulation of the jeans in relation to the particular uses and functions, such as that of migrants in North London seeking to overcome identity markers, one may question how jeans have been articulated to discourses of gender and gendered bodies. One may also ask how jeans have been articulated to discourses of style, convenience, and self-expression. Moreover, the question of how jeans have been articulated to particular populations becomes relevant. There is, for instance, a difference between an elderly man wearing a pair of jeans because they enable him to show off his trim body, and a young father who dresses his six-month old son in a pair of Ralph Lauren jeans because he equates designer jeans with possessing fashionable good taste. One may also question what jeans’ changes articulate towards existing styles in dress – think about the world’s leading politicians such as Barack Obama, Nicholas Sarkozy and Dmitry Medvedev appearing dressed in jeans. Lastly, one may ask of what articulations a pair of jeans itself consist of. Just as Wise emphasises that a mobile phone as a unity must be a result of particular articulations, jeans can vary in design, material and appearance, and are thus always the result of particular articulations themselves.

Wise writes that the perspectives he provides us with – the received, the contextual, and the articulated view – are common perspectives upon the way humans interact with objects, mobile phones in his case

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8 These examples were taken from Miller, 2010: 422.

9 See Binkley 2009.
and jeans in relation to my study. He emphasises that “the discussion of articulation gets us part way back to assemblage” and suggests that “perhaps assemblage is a more complex model of articulation” (2005: 84). I therefore suggest making one more step to arrive at the concept of assemblage as Deleuze and Guattari intended it, rather than appropriating the concept of articulation to other practices and instances of wearing clothes. By doing so one will discover that there is even more complexity involved than meets the eye through a perspective of articulation.

In the conclusion to *A Thousand Plateaus* Deleuze and Guattari emphasise that “[a]rticulation, which is constitutive of a stratum, is always a double articulation (double pincer). What is articulated is a content and an expression” (2004 [1980]: 553 [original emphasis]). The strata are what Deleuze and Guattari call the organising principles of the world, situated on the segmental, molar or striated level. What you are, what this means, and who you are, are examples of organising principles that divide society into one in which males, females and children, and their rights, values and identities are coded. The ways in which items of clothing are coded for their significance – and overcoded to represent the identity of the wearer (as described in Chapter 3) – can be regarded as articulations that organise society in distinct segments. In the next section, I will elaborate on the distinction between content and expression, and as such will introduce Deleuze and Guattari’s concept of assemblage.

**Machines in Assemblage**

By distinguishing content from expression, Deleuze and Guattari already indicate that there is more to be said about the organisation of society than the strata reveal. Therefore they introduce the concept of assemblage. Assemblages, Deleuze and Guattari write, “are produced in the strata, but operate in zones where milieus become decoded: they

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10 See, for instance, Patricia Pisters’ *The Matrix of Visual Culture. Working with Deleuze in Film Theory* for an elaboration of ‘Molar and Molecular Levels of the Subject’ (2003: 110).
begin by extracting a *territory* from the milieus” (2004 [1980]: 553 [original emphasis]). Whereas content and expression constitute the horizontal axis of an assemblage, a vertical axis deals with the territories in which the assemblage takes place and is stabilised. It is on this vertical axis where Deleuze and Guattari situate the deterritorial ‘cutting edges’ which are capable of breaking with the territorial forces and carry the assemblage away. Or as Deleuze and Guattari phrase it:

On a first, horizontal axis, an assemblage comprises two segments, one of content, the other of expression. On the one hand it is a *machinic assemblage* of bodies, of actions and passion, an intermingling of bodies reacting to one another; on the other hand it is a *collective assemblage of enunciation*, of acts and statements, of incorporeal transformations attributed to bodies. Then on a vertical axis, the assemblage has both *territorial sides*, or reterritorialized sides, which stabilize it, and *cutting edges of deterritorialization*, which carry it away.

(Deleuze and Guattari 2004 [1980]: 97-98 [original emphasis])

Comparing the above to the concept of groups and individuals as made up of lines (as examined in the previous chapter) may clarify the quotation effectively, after which we can continue examining the wider machinic character Deleuze and Guattari envision in relation to their concept of assemblage.

As an individual one experiences passions and actions with which our body intermingles with other bodies (content). One also experiences incorporeal transformations when distinguishing between, for instance, work wear and leisure wear (expression). The segment of content and that of expression is stabilized by the territorialisation or reterritorialisation in which it takes place. The difference between how we feel and act at a workplace and at home, for instance, is dependent on them. One may, however, also experience a schism or break from

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11 In his ‘Notes on the Translation and Acknowledgements’ to *A Thousand Plateaus* Brian Massumi states that the term ‘milieu’ is a technical term which combines the three French meanings of the word: ‘surroundings’, ‘medium’, and ‘middle’ (2004 [1980]: xvii). Here it can be regarded as the middle between expression and content, where a territory is enveloped.
stabile territories in which content and expression are carried away (deterritorialised) in order to invent an individual or group anew. In the previous chapter early punk as well as the Casu...0149 operate along these deterritorialising lines (of flight).^{12}

Content and expression, (re)territorialising and deterritorialising forces are not limited to individuals and groups of people. As described in the introduction to this chapter, Deleuze and Guattari are after a heterogenetic analysis to replace a thinking in overcoded structures from politics, industry and society. Such an analysis implies a ‘mechanosphere’ in which the infinitesimal, the microscopic, and the molecular, as well as the molar, the macroscopic, and the cosmos as a whole can be examined for the territories they appear in, break off, or re-enter into; the assemblages they may form; the forces and processes that take place; and the transformative qualities that potentially emerge. The following diagram may clarify Deleuze and Guattari’s concept of assemblages and is used to elaborate upon what a pair of jeans may do, and into which territories its particles enter during production.

In the top-left part of the diagram fashion is organised according to a pragmatic system for what it does. The example of a woman putting on her partner’s pair of jeans can be situated here; the pair of jeans is coded for its material content, reterritorialised from the man’s body onto that of the woman. The top-right section deals with the organisation of signs into a semiotic system. Operating on the strata, and as such creating rigid segments, one could say that the overcoding of the ‘boyfriend jeans’ by fashion brands offering it ready made involves regulating the expression of such a pair of jeans, providing it with a territory, without involving the actual former territory of a man’s body.

The solid line dividing what fashion may do (content), and what it may say (expression) when operating on the strata indicates that the two are not reciprocal and hence a real distinction can be made here. The bottom half of the diagram deals with what fashion may do and what it may say after decoding and deterritorialisation has taken place on a line of flight. Here the assemblage belongs to smooth spaces, the molecular,

^{12} Rei Kawakubo, as described in Chapter 2, of course, also operates along lines of flight.
deterritorialisation
line of flight
decoding
what fashion may say
(re)territorialisation
what fashion may do
content
expression

corporal alteration
incorporeal transformation
creation of new forms and materials
invention of new expressions
expressive forces
material forces

coding
coding

clothing / material / bodies for what it / they do(es)
clothing / material / bodies for what it / they represent(s)

organised matter
pragmatic system
organised signs
semiotic systems

homogeneous
stratified space
molar
rhizomatic
nomadic
smooth space
heterogeneous

Figure 4.1
Tertravalence of Assemblages
heterogeneous realm. In addition, the distinction between what fashion does and what it says is largely absent and rather a reciprocal presupposition. It is here where corporeal alterations and incorporeal transformations take place; where new forms and new materials are created which enable new expressions; and where material and expressive forces come into play.

As examined in Chapter 2 in relation to smooth and striated spaces, organised matter and signs are not worse or better than deterritorialised ones, just different. They are, furthermore, dependent upon each other. Or as Deleuze and Guattari write: “The territory is just as inseparable from deterritorialisation as the code from decoding” (2004 [1980]: 556). I, however, am interested in the machinic aspect (content) of the assemblage that is not necessarily distinct from its expression (as content and expression are situated in the lower part of the diagram). On the one hand, it is here that new expressions, forms and materials for fashion may be detected. On the other hand, such a perspective upon fashion allows me to view it as a heterogeneous system, which, in fashion’s case, may lead to viewing its ethical and environmental problems in their full scope. I hence will briefly elaborate on the concept of machinic assemblages and their character below, after which I will examine the pair of jeans as a ‘little machine’ in the subsequent section.

**Little Machines**

As an assemblage, a book has only itself, in connection with other assemblages and in relation to other bodies without organs. We will never ask what a book means, as signified or signifier; we will not look for anything to understand in it. We will ask what it functions with, in connection with what other things it does or does not transmit intensities, in which other multiplicities its own are inserted and metamorphosed, and with what bodies without organs it makes its own converge. A book exists only through the outside and on the outside. A book itself is a little machine; [...]  
(Deleuze and Guattari 2004 [1980]: 4)

In the quotation above Deleuze and Guattari regard a book as a ‘little
machine’. So is a bicycle, a pair of jeans, a watch, a bag, a dress, a pen, a language, a body – whether human or not – and all other entities – whether material or not – in this world, including life itself (Deleuze and Guattari 2004 [1980]: 12). How is one to understand their use of the term ‘machine’, and how is it related to their concept of assemblage? In *Kafka: Toward a Minor Literature* they write that “[t]he fact that [...] singularities are active and creative becomes evident in the way they assemble (s’agencent) and form a machine in turn” (1986 [1975]: 86). A machine is thus the result of an assemblage (agencement) of particular singularities. The book as a machine is then the result of the assemblage of words as creative singularities.

Whereas the machinic part of the assemblage determines the content of it, on the same horizontal axis the collective assemblage of enunciation is in effect that caters for the expressive part of the assemblage; the transmission of intensities. Moreover, and as described at the end of the former section, an assemblage is stabilised by its (re)territorial sides, and may ‘break off’ through deterritorialisation. Reading a book hence involves a multiplicity of assemblages that determine what happens in relation to their (re)territorialisations or potential deterritorialisations – the latter accounting for contingent, surprising, and experimental outcomes, and as such for ambiguity: we cannot know what a body and a book may do (see Figure 4.1).

A machine, in the sense that Deleuze and Guattari use the term, is thus not to be regarded as a metaphor that represents the book or a pair of jeans in some way or another. The machinic character of a book as an assemblage emphasises the possible productive connections that can be made. The book itself – as ‘a little machine’ – is an assemblage of words that in turn are assemblages of letters. Within a common perspective one would most likely view a machine as an entity that has been created to perform a specific task. But for Deleuze and Guattari it is neither the assigned task nor the meaning of a book, a pair of jeans or a bicycle that is of interest. By emphasising the process of assemblage that coincides with the becoming of a machine, the concept of assemblage enables them to focus on the possible connections before assigning any specific task or meaning to an object or organism.\(^\text{13}\) According to Deleuze and Guattari

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\(^{13}\) Here the concept of a ‘Body without Organs’ (BwO) is of interest. This »
a machine has no end (specific task), or identity (meaning) and only constitutes of its potential connections. A book, a bicycle and a pair of jeans are little machines; they exist of connectives capable of connecting with other machines through creating assemblages on a distinct territory.

When Deleuze and Guattari write that they will not look for meaning in a book, nor will they try to understand a book, they emphasise that they are predominantly interested in how a book functions in connection with other ‘machines’. A connection, as Deleuze and Guattari posit it, resembles the concept of articulation exemplified by Wise, and was illustrated in the previous section by emphasising that the connections are constitutive of understanding the functions of things and practices - jeans and the way immigrants use them to ‘unmark’ their identity, for instance. How then is one to understand these machinic connections? Since machines are the result of assemblages, we must also question how they relate to one and another into ‘machinic assemblages’ before we can examine how this perspective contributes to the productive and transformative connections one may find in fashion.

Without going into the specific functions of all the different machines mentioned by Deleuze and Guattari, I would like to emphasise that for Deleuze and Guattari there are only machines and they consider life itself a machine. When reading a book, for instance, the eye-machine is connected with the book-machine and with the sophisticated brain-machine; the book-machine is connected to the hand-machine that holds it, the page-machine is connected to the finger-machine when turning a page, and the finger-machine is connected to the sputum-machine, which in its turn is connected to the mouth-machine when it is made moist in order to make turning the pages easier. All these machinic connections involved in reading a book are the result of assemblages of heterogeneous elements, and the assemblage must be understood as the process of bringing these elements together. Once brought together, the machinic aspect of the assemblage is ‘in connection’ temporarily. That is to say,

» concept can be related to ‘bodies’ (including plants, water, animals, fabrics) that are viewed from a perspective that thinks about them before assigning them any organisational elements. It is hence a body that is populated with intensities not organised and as such opposed to the organising principles (strata) that structure society.
as soon as a page has been turned the finger-machine, for instance, no longer forms a machinic part of the assemblage.

Why would Deleuze and Guattari regard relatively simple activities, such as the reading of a book, in such a complex manner by emphasising the connections that are being made in the process? What is lost in thinking of a reader as someone who simply picks up a book and starts to read? By stressing the machinic character of bodies, actions and passions, Deleuze and Guattari emphasise the potential connections that can be made between, for instance, a book and a reader, a book and a writer, a book and a shelf, and so on. Such a perspective enables them to develop heterogeneous analyses of the elements involved, without giving superiority to any one of them above any other. They additionally undo the dominance of the specific human subject or object we usually determine before thinking about the connections that are being made. In this sense the book and the reader, or the pair of jeans and the wearer, become of equal importance since the connections that are being made are of primary interest. These connections made in assemblages determine the functioning of the machine; they govern what happens and what does not. In addition, Deleuze and Guattari consider a human subject predominantly for its potential connections that can create new functions. As such, the human subject does not make a more determining machine than an item of clothing or a book, which would lead to a homogeneous analysis in which a human perspective prevails over all other potential perspectives one may adopt. Moreover, a human subject is also only regarded as a contingent – and ever-changing – potential of little and larger, or more or less sophisticated, machines.

By focussing on the potential – minute – connections between entities, Deleuze and Guattari omit grounding perceptions onto the dominance of a subject. When they “ask what it functions with, in connection with what other things it does or does not transmit intensities” (1987 [1977]: 4), they do not foreground the importance of the specifically human connection above other connections. Moreover and as mentioned, Deleuze and Guattari’s concept of machines in assemblage enables one to adopt a heterogeneous perspective in which no one entity prevails over others, and the focus is drawn to which connections enable which transformations. This entails that in a study
of jeans it is not necessarily the human subject wearing the jeans that provides us with the most valuable perspective (or connections) to discover new ways of functioning. Deleuze and Guattari’s concept of machinic assemblages thus overturns the common perspective in which we – as human subjects – are the principal entity. Whereas we habitually perceive ourselves and objects surrounding us as unities that possess an identity, Deleuze and Guattari open up a line of thought that focuses primarily on the contingent relations between entities and hence stress the multiplicity of potential functions. They seek to go beyond an identity-based perspective and are more interested in the connections that produce new ways of thinking, new expressions and new realities.

Claire Colebrook provides us with a clear description of ‘the machine’ that reveals both Deleuze and Guattari’s perspective on – and aims with – ‘the concept of machines’ when she distinguishes a machine from organisms and mechanisms.

An organism is a bounded whole with an identity and end. A mechanism is a closed machine with a specific function. A machine, however, is nothing more than its connections; it is not made by anything, is not for anything and has no closed identity. So they [Deleuze and Guattari, RLB] are using ‘machine’ here in a specific and unconventional sense.

(Colebrook 2002a: 56 [original emphasis])

Colebrook uses the example of a bicycle to elaborate upon the concept and to remind us what thinking through machinic connections entails. She explains that a bicycle has no end in itself; it only becomes a vehicle when connected with a human being. One can ascend a bicycle and thus engage in a machinic assemblage with the bicycle in which body and feet, and bicycle and pedals form a new machine that can create movement and speed, which will take both the bicycle and the human being (who has now become a cyclist) to a destination. There are also bicycles in museums, such as Jean Tinguely’s 1959 Cyclograveur, Marcel Duchamp’s 1913 Bicycle Wheel, and Ai Weiwei’s 2011 Forever Bicycles.14 And there are bicycles at rest submerged in a canal, locked

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14 Although Colebrook provides the reader with the general example of bicycles in museums, the specific examples given here are my own.
on the street or on sale in a shop. Although one refers to all the bicycles in the examples above as being bicycles, it is clear that they have quite distinct locations (territories), functions and variable ways in which a human being can relate to them – or connect in an assemblage with them. A machinic perspective upon the bicycle thus enables a thinking about bicycles and the way they function in context before adopting a habitual perspective in which we regard the bicycle mainly as a means of transport. I suggest examining how one would regard a pair of jeans in this perspective in the following section.

**A Pair of Jeans as a Little Machine**

If we study jeans from a *machinic* perspective, we must start by foregrounding that, like a bicycle, a pair of jeans in itself has no end: it is merely a shape created through sewing pieces of patterned denim into a whole. A pair of jeans in itself does not signify anything; it is only in connection with the territory of a specific culture and its semiological system that one can assign meaning to a pair of jeans at all. As in the bicycle-example above, one can view a pair of jeans as being part of an artwork, such as the giant ball of bulk jeans that appeared at the Chinese *Fashion Slave* exhibition in Xiamen in 2006, which intended to express the poor labour conditions of the workers that produce our jeans.  

Whereas meaning is assigned to jeans in the strata, the giant ball of jeans expresses new affective forces that one may relate to the material jeans, such as those effectuated by the potentially overwhelming size of the ball, or the body shapes still present in the individual pairs of jeans.

In addition, one can look at the ways in which jeans and human bodies connect and the materiality of jeans is altered – a perspective art historian Kitty Hauser adopts in her article ‘The Fingerprint of the Second Skin’ (2005: 153). Hauser examines the forensic practices of denim analysis and provides us with a particularly interesting case in which Dr. Richard Vorder Bruegge (of the Special Photographic Unit of

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15 See, for instance, https://www.bandmark.com/denim-globe-for-all-mankind/, accessed September 2013. Apparently balls consisting of bulk jeans have appeared in several places since.
the FBI) investigated the individuating properties of worn denim jeans. Faced with a series of unresolved crimes, in which the only individuating characteristics of the criminal caught on CCTV were the jeans he or she was wearing, Vorder Bruegge developed an interpretative theory in which he combined the manufacturing process of the jeans with “[t]he way an individual washes his/her jeans, whether they iron them, what they carry in their pockets, the way they walk, and so on.” Vorder Bruegge came to conclude that this results in “particular patterns of fading and wear” (Hauser 2005: 153). The ‘distinctive barcode’ or individualised jeans-DNA, as Vorder Bruegge characterised the pattern on the seam of the leg, is the result of the connection between the wearer and the pair of jeans on the one hand, and between the manufacturer, or seamstress, and the pair of jeans, on the other. As Vorder Bruegge discovered, the particular pattern of wearing and fading on (mainly) the outside seam of the leg of a pair of jeans is at least partly dependent on the way the jeans were sewn together. He explains that “[w]hen, in making up jeans, the operator pushes the denim through a sewing machine, unavoidable tensions are created in the fabric, causing a puckering along the seams, a series of ‘ridges and valleys’ that is effectively unduplicable” (Hauser 2005: 158). Furthermore, the connection with the wearer becomes visible since the ‘ridges’ or raised portions of the seam will fade more easily and do so according to the specific movements, habits and physique of the wearer, whereas the lower sections of the seam – the ‘valleys’ – remain their original dark denim blue.

If we are to view Vorder Bruegge’s jeans barcode in the light of
Deleuze and Guattari’s concept of assemblage, one can detect a ‘jeans-manufacturer-body assemblage’. The unique qualities of the pair of jeans – the distortion (pucker) that occurs along the seams – depend entirely on the way the seamstress has sewn the seams: an assemblage between the hands of the seamstress, the tension on the fabric caused by the sewing machine, having their effect on the ‘territory’ of the jeans. Once the jeans are being worn, an assemblage between the body of the wearer, his or her movements and habits (washing, ironing, where and how they are being worn) and the previous assemblage of the seamstress and the jeans comes into effect. Or as Hauser writes, “[w]hat was illuminated – inadvertently – was an otherwise hidden relationship between garment, maker and wearer” (2005:164 [emphasis added]). If one is to name the Deleuzeoguattarian ‘machines’ that are connected in these jeans-related assemblages, one realises there are the body-physique-movement machines in connection, which in their turn connect with the jeans-manufacturer machine. On a minute level, molecule-by-molecule, these connectives will cause the jeans DNA – or barcode pattern – which Vorder Bruegge managed to reconnect to the criminals wearing the jeans at the time of the robbery, caught on CCTV.

Contrary to regarding the brand, style and cut of a garment as a signifier for the identity of the wearer, Vorder Bruegge demonstrated that
the *individuating* features of the pair of jeans are the result of both the physique of the wearer and the manufacturing process. The innovative and productive function of examining jeans as the result of specific and unique machinic assemblages becomes apparent when one takes into account that Vorder Bruegge was able to successfully connect the jeans to an otherwise unrecognisable criminal. As Hauser demonstrates, the second aspect that emerged from the research was that a seemingly ordinary pair of jeans becomes unique since “the hands and machine of an anonymous worker left their involuntary signature in the garment, a signature which was made visible through the habits and wear of its purchaser” (2005: 166). The wear and tear of the higher and lower areas in the four-ply thick seam may thus be regarded as an example of ‘machines’ at work in connection; an assemblage through which transformation of the materiality of the jeans is created.

**Fashionable Assemblages**

The example of the individuated jeans in which the body and movement of the wearer, the hands of a seamstress, the sewing machine and the denim, and the resulting pair of jeans are shown to be in assemblage and transformed (by wearing, walking, washing and fading) into a unique individuated whole, does not stand on its own. After briefly recapitulating the differences between common views on contexts and connections in relation to clothing and Deleuze and Guattari’s assemblages, I will, in this section, turn to the ways in which predominantly men relate to what one names ‘raw denim’, and how this may be regarded as an example of a fashionable assemblage.

Situated on the strata, the molar level of fashion, what fashion may do (content) and what it may say (expression) appear distinct and the two are not necessarily related (see Figure 4.1). This is the homogeneous level of fashion in which material, bodies and clothing are organised according to what they do or what they signify. For instance, studying the development of jeans overalls from nineteenth century workwear to the high fashion jeans overalls that appeared on the Ralph Lauren catwalk for their Spring 2010 collection entails adopting such a perspective. Although I by no means want to claim that such a study would be
without interest, Deleuze and Guattari enable a perhaps more profound examination of fashion in which the changes, transformations and alterations that occur are related to deterritorialising forces that appear on a molecular level. These nomadic forces and creations inform, and are informed by, the molar ones. Before segmented organisations can come into effect, however, there must have been molecular forces and processes that precede them. Molecular forces may become sedentary and form segments, and segments may be faced with lines of flight that cut through them and cause a breakage.

The molar and molecular, furthermore, “are not simply distinguished by size” (Deleuze and Guattari 2004 [1980]: 237); it is the difference in organisation that is of importance here. Whereas fashion as we commonly and dominantly approach it is to be regarded as a strong molar organisation in which the coding of what fashion may do and the overcoding of what it may signify appear distinct, minoritarian, or molecular, forces also play their part (see Figure 4.1). On a heterogeneous level these molecular forces operate along lines of deterritorialisation, and are extendable and can potentially reterritorialise in all directions. Furthermore, they connect content (what fashion may do) and expression (what it may say), rather than the two remaining distinct.

Unlike molar forces, molecular forces are overlooked easily, such as that of the voice (and hands) of the seamstress that has created our clothing. On the one hand, by following Deleuze and Guattari one is enabled to distinguish dominant, molar organisations from molecular ones and open up a perspective in which the latter are regarded as an important part of the whole, rather than being left unthought-of. On the other hand, further research into the actual molecularity of fashion may mobilise a perspective on assemblages in fashion that are being overlooked by a predominantly molar perspective, which favours identity performances, representations and signification. Deleuze’s concept of molecularity thus can be regarded as one that emphasises the role of minorities, such as the seamstresses that make our clothes, while it is also a concept that inspires an examination of the minute exchange of particles that takes place when fabric, flesh and other extrinsic elements are connected in an assemblage.

Deleuze and Guattari’s interests thus lie in ‘what happens’ when body and jeans are in movement and connection with other external
elements such as a floor surface, the washing machine, the assemblage of knees against the jeans when cycling, walking, or resting. Consider the following:

[...] we ask each time into which assemblages [these] components enter, not to which drives they correspond, nor to which memories or fixations they owe importance, nor to which incidents they refer, but with which extrinsic elements they combine to create a desire [...].
(Deleuze and Parnet 1987 [1977]: 97)

Neither the identity of the wearer nor the item of clothing itself is to be regarded as a principle source of information. In Deleuze’s perspective both the wearer and the item of clothing are to be seen as ‘machines’ of which the connections that are being made are of principle interest. We may hence conclude that Deleuze and Guattari add the concept of a ‘breeding ground’ to what fashion may say and do. And it is on this level where content and expression are not necessarily distinguished, where new forms, materials and expressions occur, which account for fashion’s transformative, dynamic and ambiguous character. I therefore propose focusing on jeans from such a perspective in order to question where machinic assemblages are in effect and contribute to fashion’s expressive qualities and the creation of (Deleuzian) desires.

In contrast to artificially distressed denim, for which faded areas are created during the production process through rubbing, sandblasting or stone-washing, raw denim is not treated as such and hence features the original dark blue (indigo) colour. Admirers of raw denim prefer the unique fading that occurs through wearing and moving around in the pair of jeans, appearing much like the jeans Dr. Richard Vorder Bruegge examined. In addition, they wash their jeans as little as possible to emphasise the fading that occurs naturally, rather than through washing them. For instance, RAWR denim, an online resource for raw denim, features a forum where raw denim fans submit photographs of their individualised pairs of jeans, mentioning the number of months they have worn them and the number of washes or soaks the pair of jeans has
As such the pair of jeans is granted its expressive qualities through the assemblage between the specific movements and habits of the wearer and the pair of jeans itself. The materiality of the jeans is altered, which also makes its expressive forces apparent. The admirers of raw denim jeans do not predominantly adhere to their jeans through the representational value brands may communicate. Even though brand names are included in the descriptions of their ‘fades’, most attention is given to the quality of the pair of jeans and the number of months (or years) they last. The longer they last, the better, since particular patterns of fading will become more explicit.

One may say that the admirers of raw denim relate to fashion (or more specifically their jeans) for what it may do (content) and say (expression) due to molecular changes that occur. On the one hand, these changes are actually molecular: the faded areas appear when indigo molecules deterritorialise from the jeans. On the other hand, one

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may notice a qualitative alternative to fashion’s molar representational character, and molecular forces of individuated wear prevail over those of an overcoded brand identity. Without stating it as such, the raw denim wearers are attached to their jeans for the unique expressions that are the result of their bodies, the items carried in their pockets, the movements these undergo, and the transformation of the material of their jeans in assemblage, which can be directly related to the treasured and expressive fading. It is, furthermore, a way of engaging with fashion that succeeds to diminish the dominance of overcoded practices fashion brands encourage, and as such reveals an alternative to relating to fashion for its representational practices by emphasising the individuated qualities of the pair of jeans.

Washing their jeans as little as required, mending them when necessary, and wearing them for as long as they possibly can, also reduces wastefulness and overcomes the ephemeral character of fashion as it was emphasised in relation to fast fashion being a disposable fashion in the introduction of this chapter. Even though this is only one example of how we may relate differently to our clothes by adopting a perspective of assemblage, there are bound to be more ways of doing so. Before looking into how one may relate to the production of clothing differently through thinking in assemblages, it is necessary to examine the assemblages that come into effect, occupy different territories and break off to reside elsewhere during the production of a pair of jeans. Since it is my contention that examining fashion through a heterogeneous perspective, the concept of machinic and molecular assemblages may also reveal the scope of the problems one may detect in relation to the way clothing is produced.

Dirty Clothes

Before we can dress in a pair of jeans they obviously need to be produced; cotton is planted, irrigated, fertilised, treated with pesticides and insecticides, grown, harvested, spun, woven, bleached, washed, dyed, washed, and printed (with texts and images), or finished (through the artificial fading of jeans, for instance). In all these instances different assemblages are being created that occupy differing territories whilst
transforming the cottonseeds into the final items of clothing. Water, chemicals, soil, plants, insects, fish and workers are in connection temporarily to reconnect in new machinic assemblages performing new functions on new territories. According to the European Union 9.982 litres of water are used in the average life cycle of a for a pair of jeans (EU 2012: 7). Most of the water used in connection with jeans consists of indirectly used water, such as the water used during the several production phases of cotton mentioned above. Around 25 per cent of the water used, just under 2,500 litres (the equivalent of 35 bathtubs), is used when washing the items of clothing (EU 2012: 5). Throwing out an unworn pair of jeans would hence still account for wasting around 7500 litres of water, which in Amsterdam amounts to 12.50 Euros.¹⁷

Most of the water used during the production of cotton is not from a European source; cotton is typically produced in Mediterranean or desert climates and the top six cotton-producing countries – producing seventy-five per cent of the total world production – are China, USA, India, Pakistan, Uzbekistan and Turkey (Soth et al. 1999: 2). And although cotton grows best in hot climates, it is also the most freshwater-intensive crop to be found in agriculture: whereas potatoes require 500 litres of water per kilo, a kilo of cotton requires up to 29,000 litres of water (Soth et al. 1999: 10). Furthermore, seventy-three per cent of all cotton agriculture is irrigated, which entails drawing fresh water from rivers, lakes or reservoirs, which causes lower lands to be deprived of water or ground water depletion (Soth et al. 1999: v). In addition, ten per cent of all the pesticides and twenty-four per cent of all insecticides used in agriculture is used for growing cotton, and amongst the latter are five extremely hazardous types (Ibid.). The water and particles of pesticides, fertilisers, and salts flow back into the ground and open waters, where they enter into new assemblages which cause salinization of the earth and increasing growth of algae in open water. The insecticides, especially those distributed by airplanes, also find their way to open waters: in 1995, “contaminated runoff from [the] fields resulted in the death of more than 240,000 fish along a 25 km stretch of a river in the State of Alabama” (Soth et al. 1999: 16). This instance received attention due to its size and its territory being the United States, but all over the world chemicals

deterritorialise to enter into new assemblages and reterritorialise and function in ways that are particularly harmful to the environment.

Although it is difficult to estimate how many agricultural workers suffer from health issues or even death through acute pesticide poisoning, 2008 research into cotton growers in India showed that almost half of the applications contained organophosphates which cause “adverse effects on the central and peripheral nervous systems” (Mancini et al. 2008: 230). The World Health Organisation also acknowledges the problem and writes that the risk of pesticide poisoning is expected to be highest “[i]n developing countries, where there is insufficient regulation, lack of surveillance systems, less enforcement, lack of training, inadequate access to information systems, poorly maintained or non-existent personal protective equipment, and larger agriculturally-based populations” (Thundiyil et al. 2008). Buying products made out of organic cotton eliminates the usage of highly hazardous chemicals since only non-synthetic pesticides are allowed, and in addition, genetically modified cotton is prohibited. Organic cotton production, however, does not come without its controversies. In 2010, for instance, Eco Textile News reported that genetically modified cotton was discovered in items of clothing that were labelled ‘organic cotton’ from H&M and C&A and admitted “reports from reliable, trusted organisations and producer groups about fraud within the Indian sector of the organic cotton industry have been common-place.”

Further research into the assemblages into which the material of a pair of jeans has entered before we can wear them will only paint a grimmer picture. I have merely described the growing of the cotton and may already conclude that a great strain is being put on water resources; water and ground pollution are ubiquitous and traces of pesticides are not only found in insects and fish but also in the wildlife that consumes these and in the people that work on the land. Organic cotton provides an alternative, but is not free from fraud and perhaps also used in certain items of a brand’s collection for gaining favour from customers. Dutch jeans brand G-Star, for instance, holds a membership of MADE-BY, a

European not-for-profit organisation acting to improve environmental and social conditions within the fashion industry.

As one may notice, the top left pie chart indicates that more than half of G-Star’s collection is produced in C-class or unclassified factories, which are not monitored by any certified initiatives within the field of fashion and ethical trading. MADE-BY collaborates with six major initiatives for their benchmark for social standards, such as the Ethical Trading Initiative (ETI), the Fair Labour Association (FLA), the Fair Wear Foundation (FWF), and Social Accountability 8000 (SA8000), which are rated class A, and the B-rated class of the Business Social Compliance Initiative (BSCI) and the Worldwide Responsible Apparel Production (WRAP). G-Star, however, has its own foundation: the GSRD Foundation, which is focussed on the support of education and

entrepreneurship. It is not clear why G-Star has not chosen to comply with the codes of conduct of any of the certified organisations mentioned above, but it may raise eyebrows, specifically when one realises the cotton G-Star uses is largely conventional (almost eighty per cent) rather than organic, and rated class E material, which entails the least sustainable greenhouse gas emissions, human toxicity, eco-toxicity, energy, water and land use. One may conclude that G-Star connects with people in the countries where they produce their jeans and supports the education and entrepreneurship of the locals. On the other hand, viewed from the perspective of molecular assemblages, they continue to turn away from the ecological damage that is caused in the machinic assemblages between cotton plant, water, soil, pesticides and people. It is, nevertheless, these ‘hidden’ assemblages that precede the possibility of producing jeans to begin with.

Many fashion brands, including G-Star, may monitor the first-line companies they work with, although these companies often do not produce their own fabrics, but purchase them from cotton mills where cotton lint is spun into yarn. In October 2014, the Dutch Centre for Research on Multinational Corporations (SOMO) and the India Committee of the Netherlands (ICN) published a research report titled Flawed Fabrics in which they examine the abuse of girls and women in the South Indian textile industry. The results of this investigation into the working circumstances in five cotton mills in the Tamil Nadu spinning industry are alarming and have until now remained largely unnoticed since many fashion brands that use the yarn for their finished products are not in direct contact with the mills. In other words, fashion brands have started monitoring the factories where their products are being produced – especially since the collapse of the Rana Plaza garment factory, killing 1.129 people in 2013 – but they have little to no knowledge of the practices in cotton mills where the cotton for their


products is produced. These cotton mills are, nevertheless, part of the fashion producing assemblage, since without them no cotton would be ready for weaving and knitting.

Primark, C&A, underwear and sportswear brands under the parent company HanesBrands, and baby- and children’s clothing brand Mothercare were in direct contact with the cotton mills, but, as mentioned, most brands are connected to the mills indirectly since second-line producers of cotton purchase the yarn from the mills for them. Amongst those are fast fashion brands such as H&M, Gap, and Abercrombie and Fitch, which were identified by the researchers, although there are bound to be many more brands involved that have not been identified for being connected to the mills researched (Theuws and Overeem 2014: 16, 17). SOMO and ICN report that “[g]irls and women are being lured from their home villages by false promises and are working under appalling conditions amounting to forced labour” (Theuws and Overeem 2014: 5). Many girls start working at the mills from the age of fifteen, they are not allowed to leave the factories’ premises, work up to sixty hours a week, receive salaries of between 20 and 52 euros, do not receive a contract nor a minimum wage, and have no right to association (Ibid.). SOMO and ICN, furthermore, “found an alarming lack of transparency […]. The market parties, both producers in Tamil Nadu and buyers from all over the world, are not forthcoming with even basic information” (Theuws and Overeem 2014: 7).

Overlooking the machinic assemblages between the bodies of the workers, the cotton, and the machines within the mills, means ignoring a workforce of over 400,000 workers involved in producing the ground product – under appalling conditions – for fast and cheap fashion products. All brands mentioned, however, communicate their social responsibility and environmental actions, drawing attention away from, for instance, the highly toxic cotton growing and circumstances in factories of second-line suppliers such as the cotton mills mentioned above. Some brands choose to foreground their best practices in order to convince consumers that purchasing their products is an ethical thing to do - see for instance G-Star’s Raw from the Oceans campaign (featuring popular pop-star Pharell Williams) or H&M’s Conscious Collection. Gap, Mothercare and HanesBrands also foreground their goals or best practices on their websites, whilst withholding important information.
from consumers, such as the use of conventional cotton.

These practices are, obviously, part of the strategies of these brands. While it is encouraging to see that the brands are bettering their practices, one may also notice they are highly skilled communicators set to emphasise and overcode their ethical practices to draw attention away from those that are not. It is their task to make consumers believe it is not a problem to purchase fast fashion products, and it must be noted they are very skilled at doing so. The assemblages in which the 400,000 workers in the spinning industry in India or the cotton growing farmers enter, let alone those in which the environment enters, remain largely hidden.

Before we can dress in a pair of jeans more is needed. The spinning mills sell yarn or unprocessed cotton fabric as a half-product to production companies that pre-treat the fabric, dye it, secure the dyes by applying a ‘finishing’ treatment, and optionally print the fabric.\(^\text{23}\) The fabric used for a pair of jeans will need to be chlorine bleached which, according to MADE-BY’s *Wet Processing Benchmark*, involves a significant risk of contamination with hazardous chemicals. The methods used for the following dyeing process may vary, but seven out of the nine possible techniques involve significant or possible concerns of contamination with hazardous chemicals. The after-treatment during which residue dyes are washed out involves hazardous chemicals in two out of the four methods used. And the finishing process for jeans may involve using bleach shading or formaldehyde resins (hazardous chemicals), or sandblasting, ozone finishing, or ice potassium permangrade washing, which all involve possible concern for serious occupational health and safety issues.\(^\text{24}\) Once again, there are numerous hidden assemblages taking place connecting water, workers, and hazardous chemicals, before our clothes have their final looks.

The hazardous chemicals used for dyeing, printing and finishing our clothes do not completely wash out at the production facilities and as such do not just reterritorialise with water, people, and soil in their

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\(^\text{24}\) All information from MADE-BY.org, see previous note.
countries of origin. Greenpeace’s 2012 publication titled *Toxic Threads: The Big Fashion Stich-Up*, reveals that nonylphenol ethoxylates (NPE’s) used for dyeing textiles, and azo dyes containing toxic phthalates (which, for instance, give plastic prints their flexibility) are not only found in the wastewaters of the factories, but also in those of countries where the chemicals are banned. Through washing garments that have been treated by NPEs and azo dyes these chemicals find their way in assemblages with our domestic wastewaters, which then become their territory.

As the figure above shows NPE’s break down into toxic, hormone disrupting nonylphenol (NP) once in assemblage with wastewater. In
Table 1. The number of samples in which NPEs, phthalates and cancer-causing amines released by certain azo dyes were identified. Results are shown by product brand, with the percentage of positive results for each brand.

<table>
<thead>
<tr>
<th>Brand</th>
<th>No. of samples</th>
<th>No. tested positive NPEs</th>
<th>Percentage of samples tested positive per brand NPEs</th>
<th>No. tested positive for phthalates, above 0.5% by weight</th>
<th>No. tested positive for cancer-causing amines by certain azo dyes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIORGIO ARMANI</td>
<td>9</td>
<td>5</td>
<td>56%</td>
<td>1</td>
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<tr>
<td>benellon</td>
<td>9</td>
<td>3</td>
<td>33%</td>
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<tr>
<td>GioG</td>
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<td>2</td>
<td>50%</td>
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<tr>
<td>CA</td>
<td>6</td>
<td>5</td>
<td>83%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calvin Klein</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIESEL</td>
<td>9</td>
<td>3</td>
<td>33%</td>
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<tr>
<td>ESPRIT</td>
<td>9</td>
<td>6</td>
<td>67%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAP</td>
<td>9</td>
<td>7</td>
<td>78%</td>
<td></td>
<td></td>
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<tr>
<td>H&amp;M</td>
<td>6</td>
<td>2</td>
<td>33%</td>
<td></td>
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</tr>
<tr>
<td>JACK&amp;JONES</td>
<td>5</td>
<td>3</td>
<td>60%</td>
<td></td>
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<tr>
<td>LEVI'S</td>
<td>11</td>
<td>7</td>
<td>64%</td>
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<tr>
<td>MANGO</td>
<td>10</td>
<td>6</td>
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<tr>
<td>M&amp;S</td>
<td>6</td>
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<td>Metersbonwe</td>
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<td>ONLY</td>
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<tr>
<td>V&amp;A</td>
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<td>VANCL</td>
<td>4</td>
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<td>100%</td>
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<tr>
<td>VERO MODA</td>
<td>5</td>
<td>4</td>
<td>80%</td>
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</tr>
<tr>
<td>VICTORIA'S SECRET</td>
<td>4</td>
<td>2</td>
<td>50%</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ZARA</td>
<td>10</td>
<td>6</td>
<td>60%</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Figure 4.7

Toxic Brands
The toxic trail of clothes

1. Formulations are manufactured containing nonylphenol ethoxylates (NPEs) and are delivered to textile manufacturers to use in processing. Some azo dyes that can later release cancer-causing amines are used in dyeing processes. Other hazardous substances are also used in various processes. Plastisol formulations containing toxic phthalates for printing images on textiles are used in textile finishing.

2. Lax regulation and the inadequate policies by global clothing brands to eliminate the use of NPEs, phthalates, and other hazardous chemicals results in wastewater discharges containing these hazardous chemicals, or toxic chemicals that they give rise to, entering public waterways, such as rivers and lakes.

3. Following release in wastewaters, NPEs break down to form the persistent, toxic, hormone-disrupting nonylphenol (NP), which can accumulate in sediments and build up in the food chain, in fish and other wildlife. Effluents can also contain toxic phthalates, carcinogenic amines, and other hazardous substances including some that are toxic to fish.

Figures 4.8 and 4.9
The Toxic Trail of Clothes
4. The global textile industry then carries clothes containing phthalates, residues of NPES, and other hazardous chemicals to markets around the world, including those where NPES are effectively banned in clothing manufacture.

5. Brands’ inadequate policies then force consumers to become unwitting accomplices in the cycle of toxic water pollution when they wash their new clothes containing NPES residues, as this releases these hazardous chemicals into their domestic waste water.

6. Discarded clothes go to landfills. Phthalates leach out of discarded products, eventually reaching groundwater.

7. Wastewater treatment plants (in those markets that even have them) are generally ineffective in dealing with NPES, essentially only speeding up their breakdown into toxic NPES.

8. Hazardous chemicals from the washing of new clothes, including harmone-disrupting NPES, end up in rivers, lakes, and other public waterways – including those in countries and regions where the use of NPES in textile manufacturing is banned.
addition, toxic phthalates (acids) and carcinogenic (cancerous) amines deterritorialise and find their way and reterritorialise, via fish and wildlife, into the food chain in the vicinity of the factories. Although the usage of NPEs is banned in Europe NPs are found in domestic wastewaters through washing items of clothing which contain the hazardous chemicals as well as from leakage of items of clothing dumped in landfills (Greenpeace 2012: 10, 11).

The distribution of chemicals that are known to cause hormone disruptions and cancer is alarming wherever this occurs. The fact that the items of clothing tested by Greenpeace are all fast fashion items that are being purchased, washed and discarded by the masses, and cause pollution of the environment in countries that have banned the chemicals, reveals yet another assemblage that remained unexpected until Greenpeace performed their research.

Apart from C&A, Gap, H&M, and ZARA (brands that are also associated with using conventional rather than organic cotton, and with a lack of monitoring of practices within cotton mills), we find jeans labels Levis and Diesel and more upmarket brands such as Giorgio Armani, Calvin Klein, Victoria’s Secret and Benetton. All brands listed by Greenpeace as seeking “to increase their profits by encouraging consumers to buy more clothes and to buy them more frequently. […] This, combined with poor quality and low prices, can lead to a throwaway mind-set and shorter lifespans for clothes – even though the fabric itself could last for decades” (Greenpeace 2012: 31).

I have chosen not to research CO2 particles emitted in the production process, even though the coal-fuelled factories as well as transportation of raw products, half-products and finished products is to be considered an additional environmental hazard. Instead, I have focussed on the less visible problems we encounter when studying the microscopic assemblages that are being created in fashion. Sadly the deterritorialisation and reterritorialisation of the hazardous chemicals heavily contributes to environmental damages and dangers. In addition, the assemblage reveals groups, such as the 400,000 workers in the South Indian spinning industry alone, that are overlooked in many current initiatives to improve labour in the fashion industry. The analyses of molecular assemblages of all instances involved in the creation of items of clothing therefore is important in order to create transparency and
awareness of the full impact of the clothes we wear on ecological and human resources.

Although organisations such as MADE-BY, Greenpeace, SOMO and ICN, and the associated institutions monitoring fair and ecological fashion deliver much needed work, they appear to be too fragmented; are (apart from Greenpeace) certainly less known by most consumers than the large fashion brands; and lack the power to communicate the way fashion brands can. Current labelling is diffuse and insufficient; a pair of jeans with an ‘organic cotton’ label may very well have been spun in one of the South Indian factories mentioned above. In addition, used dyes and other chemicals are not mentioned on the labels, and it requires intensive research, such as Greenpeace has performed, to deliver results. The situation could improve and awareness can be raised through enforcing legislation that obliges fashion brands to make all production instances transparent – from cotton growing and pesticides used, through to factories involved, including their policies about chemical usage and worker rights. We seem far from such a situation, and what is most worrying (though not surprising) is that fashion brands increasingly choose to communicate and emphasise the responsible steps they are taking towards sustaining an ethical workplace and environment, even though these are insufficient.²⁵ Follow the (actual) molecules, their deterritorialisations, reterritorialisations and the assemblages these (also) enter into and see how fashion ties all of these together into numerous different assemblages that create ample opportunity for destruction of human dignity and our ecology, all because consumers are encouraged to buy more and profits can be increased. A perspective and awareness of the fact that particles are in assemblage temporarily and reterritorialise to become part of other assemblages, may begin to offer an understanding of the complexity and widespread hazards involved in producing something as seemingly simple as a pair of jeans. With a Deleuzeoguattarian perspective upon fashion that emphasises what happens before representation and identification take place hence a fuller perspective upon all forces and processes involved in what we wear can be established and taken into account. Deleuze and Guattari do

²⁵ The discrepancy between what is being expressed and what is actually done may be regarded as an overcoded practice (see Figure 4.1).
not so much ‘solve’ the related problems; their thinking in assemblages may ‘deepen’ our understandings of what happens in fashion, what is involved and what is at risk. In addition, one may realise that a more radical change in the way the material for our clothing is produced can contribute to solving the aforementioned problems. In the following section I therefore turn to two alternative approaches of producing clothing and examine their future expressive and material potential.

**Alternative Assemblages in Fashion**


> Our world seems polarized around sensory extremes: hard and soft, protection and exposure, intransigence and tactility. As textiles embrace new types of fibres and fulfil new roles, they bridge these polarities better than any other material. Fibres are dramatically transforming the world around us, and as they do so, they also inspire radical new visions for the future.
> (Quinn 2010: 5)

Interested in Quinn’s ‘radical new visions for the future’, I have examined his text specifically for the ‘bridging’ which occurs between the skin and the material since both can be regarded as Deleuze-guattarian ‘machines’ in potential assemblage. Human skin is an important entity – or machine – in relation to fashion and it is here where fabric connects to the body. The fabric, however, can be regarded as an equally important machine that enters the assemblage. One may than question how ‘smart fibres’, or ‘future textiles’ as Quinn names them, fulfill new roles and into which machinic assemblages they enter while doing so.

One of the current fields of research into future textiles is found in the implementation of ‘antimicrobial fibres’. By chemically binding silver ions or silver nanoparticles – known for destroying bacteria – to knitted
polyester fibres, a fabric is created that “has been shown to eliminate 99.0
per cent of bacteria in less than an hour of contact” (Quinn 2010: 87).
Although at first mainly used in medical applications, such as bandages,
bed linen and hospital gowns, one nowadays finds antimicrobial socks
in many mainstream stores. Wearing a pair of these socks creates an
assemblage between silver ions and the bacteria that cause feet to
smell. The new function of this assemblage is the ability to overcome
the problem of smelly feet even without paying any special attention to
the prevention by the wearer. In other words and more broadly put: the
assemblage between bacteria on the skin and the silver particles creates
the new function of sanitising body odours before they will be detected.

In relation to technological assemblages as the one described above,
one can study the further assemblages the used particles may enter into.
Once one takes off silver infused items of clothing, for instance, and
washes them, new assemblages will occur and new territories will be
occupied. What we could name the double assemblage of silver particles,
first with the bacteria creating body odour (and eliminating it) and then
with water, shows the way assemblages function. Only when connected
there is an assemblage; when this assemblage becomes disconnected its
particles can reconnect and create new assemblages with new functions.
When washed, the nanoparticles of silver enter our wastewaters and
build up in our environment. Since it is not clear what the environmental
risks entail exactly – bacterial resistance to silver has already been
reported – researchers advise to be cautious with the infusion of silver
into garments (Benn and Westerhoff 2008: 4138, Diener 2011: 37). The
increasing use of synthetic fibres with which nanoparticles such as heat
preserving aerogel particles bind more easily, is also more problematic
than when natural fibres are used, since synthetic fibres are much more
difficult to decompose. They do not enter in assemblage with the natural
biodegrading bacteria very well and as such put more pressure on our
ecological system.

Through examining microparticles and nanoparticles through a
prism of potential assemblages, one is able to discover the full scope
of potential connections that may be taken into account, similar to
the deterritorialisation and reterritorialisation of chemicals discussed
in the former section. Whereas a number of the assemblages of, in
this case, polymers (aerogels) and silver particles may be regarded as
welcome technological innovations, through the principle of continuous assemblages one can also consider those assemblages that are better avoided. Deleuze and Guattari emphasise that all parts in connection in an assemblage are equally important (2004 [1980]: 4). By implementing technologies before the impact of the future assemblages in which the materials used may enter are fully known, we foreground the problem-solving qualities for human beings, rather than those of our environment or of expression. As such it becomes more important to innovate and create new products for consumers with which they can stay free of odours, than to think about potential environmental effects and creative affects of the materials used. Ironically a perspective upon assemblages shows that we are, and in the future will remain, mere little machines entering in assemblages with an ecology that is increasingly hazardous to our lives.
Lastly, as emphasised by new media and design scholar Susan Elizabeth Ryan in her book *Garments of Paradise* (2014), developing problem-solving technologies must be related to the motives of commercial consumer industries that promise us that:

> all our needs or wants might be anticipated if only the right technology can be found, if only the right combination of application and garment can be determined, that will absolutely modernize our habits of dress and allow [corporate industries] to commandeer this new market. (Ryan 2014: 117-118)

As such, apart from neglecting to consider the ecological pitfalls that must be related to new fashion technologies, also fashion’s aesthetical qualities are omitted as criteria for innovation. Keeping warm and odourless, in other words, are practical problems, whereas fashion also has a creative and experimental character and potential. In the development of fashion technology, the latter is reduced to functional forms of, amongst others, socks, snow boots and outdoor jackets in which fashion’s creative and expressive potential is overshadowed by a practical and technologically driven functionalism. The pragmatic problem-solving through the implementation of new materials, as described above, takes place on the molar and organised level of assemblages (see Figure 4.1). One may, however, also focus upon those new materials that also imply the invention of new expressions, which operate on the molecular, heterogeneous level of the assemblage.

In search for ethical and creative innovations in fashion that operate along the inventive lines of Deleuze and Guattari’s concept of assemblage, the works of London-based fashion designer and founder of *BioCouture* Suzanne Lee come to mind. When undertaking research for her 2005 book *Fashioning the Future. Tomorrow’s Wardrobe*, Lee met Scottish biologist David Hepworth and was intrigued by the idea of fabricating clothes from cellulose. Whereas the materials commonly used to create garments such as cotton, leather and synthetic fibres require the extraction and processing of natural sources, which, as examined above, lays heavy claims on the environment, Lee teamed up with Hepworth to approach things differently.

As Lee describes in her book, she was inspired by the ways in which
indigenous cultures, such as the Inuit, have deployed natural resources such as animal skins, gut and fish skins to remain warm and dry (Lee 2005: 61). In our era biotechnology enables us to grow materials using tissue engineering, and Lee teamed up with Hepworth to examine the potential of this field for future fashions. As she demonstrates in the first four slides of her 2011 TED talk titled Grow Your Own Clothes, she used to think about fashion’s materials as being cotton, leather or synthetic, which need to be harvested, slaughtered or extracted after which several production phases take place, much like the description of the production of cotton presented in this chapter. As a result of her teaming up with Hepworth, however, she now regards green tea, sugar, microbes, and time as the prerequisites for creating material.  

Lee grows cellulose from a symbiotic mix of bacteria, yeast, and other microbial organisms that ferment in warm growing baths filled with green tea and sugar. During the fermentation process thin cellulose threads are spun, which after two to three weeks will have formed a mat of about an inch thick. Since the material consists of ninety per cent water at this stage, it is either left to dry, after which it can be sewn with a conventional sewing machine, or is formed around a three-dimensional shape when still wet. Once dry the cellulose has obtained the colour of the green tea, which gives it a skin-like quality, or it can be treated with fruit and vegetable stains to create organic patterns. In addition and interesting in relation to jeans, is the fact that she has also coloured one of her items of clothing, a jacket, with indigo. Unlike cotton which requires numerous dippings in a bath with indigo, Lee’s material is highly absorbent, which results in one dipping for it to become blue and anti-microbial due to the qualities of the plants used to comprise the dye. 

Apart from reconfiguring the ways in which fashion’s material can come about through examining alternative assemblages and omitting the hazardous reterritorialisations present in conventional manners of producing cotton, leather or synthetics, Lee also invented new expressive forces that are directly tied to the creation of a new material. The skin-like colour of the untreated cellulose, for instance, may resemble paper or vegetable leather; it bears with it a new aesthetic that is unlike other

materials around. As such Lee can also be regarded as moving beyond fashion’s organised assemblages into the molecular ones in which new expressions and new materials are reciprocally connected (see Figure 4.1).

The cellulose, in addition, is biodegradable - one could in effect put it in one’s garden where it will dissolve leaving no harmful traces. Even though there are still some downsides to Lee’s growing of clothes, such as the fact that the cellulose will remain absorbent and when sweating or walking in the rain will eventually fall apart, her approach is promising for it entails a rethinking of the ways in which we relate to fashion that includes finding sustainable solutions for its current downsides, while at the same time contributing to the exploration of new potentials. Rather than closing our eyes to what may be wrong with fashion as we know it, Lee, through experimenting with new approaches, reveals the creative potential that may surface when thinking differently and alters the connections commonly in effect when preparing fashion’s material.

Conclusion

Gaining an insight into Deleuze and Guattari’s concept of assemblages and their tetravalent character allows one to follow the molecules, nanoparticles and microbes, and create an itinerary to discover into which assemblages they enter, disconnect and where they re-enter into. By distinguishing between those assemblages situated on the strata, and those that are a result of productive deterritorialising forces, one is furthermore able to analyse fashion through a heterogeneous prism. This perspective enables regarding fashion’s affective, creative and destructive qualities as tied together, entangled and rhizomatic. Inflecting our attention from quantity to the qualities our items of clothing may possess in assemblage with our bodies is then bound to also decrease the amount of clothing being wasted.

Even though the assemblages of the strata are generally not worse or better than those of deterritorialisation, just different, in relation to fashion one may conclude that the overcodings of the fashion industry,
as described in Chapter 3, not only fuel consumption, they can also be directly linked to increased pollution and exploitation. Whereas the fashion industry, and particularly the large fast fashion brands, have the means to organise and perform the required monitoring of all infinitesimal connections in effect before and after an item of clothing comes into being, one may wonder why they have not been held responsible. Amounts of water, pesticides and insecticides used to grow cotton are measurable and can be indicated per item; wages and conditions of spinsters can be traced and mentioned; factories in which the cotton is dyed and finished and the chemicals used to do so are known; and the pollution of soil and wastewaters can be measured and communicated. When consumers are presented with the exact effects their purchases have on workers and the environment they are enabled to make conscious choices, and their behaviour and that of the fashion brands may change.

A focus upon fashion’s qualitative aspects, furthermore, encourages opening up a perspective in which material and expressive forces present in fashion are viewed as being interconnected. This entails that new material forces will also bring about new expressive forces. The faded (individuated) jeans hence entail a corporeal alteration of the jeans which can be directly related to the incorporeal transformation apparent in the way raw jeans fans express their admiration through the comments section of rarwdenim.com. In addition, experimenting with the creation of new materials and forms in fashion, such as Lee practices, can also be directly tied to the new expression the paper-like quality her material brings about (see Figure 4.1). Lee’s ‘grown garments’ take the concept of what fashion may do and say in the future into new directions, new expressions and into new assemblages which inhabit new territories. And even though it must be acknowledged these are only two examples of how fashion can be rethought, they do indicate the presence of experimental and productive desires in which the connections that produce new fashion realities are emphasised.

In an interview about Lee’s and his own work, computational architect Skylar Tibbits remarks that bacteria, unlike man-made systems, are fuelled by ‘desire’.27 His explanation of the term overlaps

27 From: http://fashiontribes.typepad.com/fashion/2015/01/
with Deleuze’s positive concept of desire as an experimental and productive striving for life in assemblage. When Tibbits emphasises that bacteria such as the ones Lee uses to grow fashion know how to change themselves in order to acquire what is needed to grow, he is referring to the fact that the bacteria desire growth and put in the right conditions (the assemblage with green tea, sugar and warmth) will do exactly that. Man-made systems, on the contrary, lack desire and need to be coded. Furthermore, it is these connections created through intensive desire that produce new fashion realities.

Regarding fashion for its assemblages hence directs us to radically rethinking what we desire and in which aggregates we may discover the ways to do so. Experimenting with undiscovered and speculative potentials, as Lee does, may not lead to direct results, but it does seem to be what is needed to eventually come up with new affective relations a creative fashion may bring. Obviously, Lee is not the only designer that experiments with new assemblages. I therefore suggest concluding this dissertation with an exploration of where creative potential, and ecological and ethical change for fashion may come about. Let us therefore leave behind fashion as it is currently organised and in the concluding chapter move beyond fixed structures to discover where fashion’s material forces may be regarded in direct relation to the invention of new expressions.