Chapter 7

Discussion
7.1 Summary of main findings

The implications of the studies for the research question are discussed in section 7.2. The text below gives an overview of the studies’ individual results.

**Study 1 (Measuring the Dutch Clothing Mountain)** gathered, generated and shared information relevant for sustainability-oriented studies and actions in the Dutch apparel sector, with a focus on clothing volumes. The findings include data on purchase (volume and value of clothes bought in the Netherlands, their developments during the last 15 years, and comparisons with other countries in the region), use (wardrobe sizes, garment types, and presence of unused and second-hand clothing), and disposal (volumes of clothes disposed of in the Netherlands, developments in the last seven years, and comparisons with other countries in the region, including characteristics of the garments disposed and their destiny).

The results confirm the importance of reducing new product demand in order to diminish the environmental impact of the sector. The 50 wardrobes examined in this study included an average of 130 pieces excluding socks and underwear. Twenty-eight percent of these items had not been worn in the last year. Nevertheless, data show that Dutch consumers purchase approximately 46 items annually, for an average of 16 euro. The quantity of clothing purchased and its minor utilization leads to increasing volumes of textile waste. Building on previous research from waste management organisations, we estimate that 40 items are disposed of annually per capita, of which 24 are thrown away in general household waste and therefore incinerated. Based on our in-depth analysis of 200 kg of separately collected textiles, we estimate that from the remaining 16 items, nine are considered suitable for reuse in the international market, while seven are sold for recycling.

The interviews with post-consumer textile collectors and sorters confirmed that global demand for second-hand clothes is falling, therefore growing volumes of clothing that are still in good condition do not even reach the reuse market. While inspecting post-consumer textiles, we found garments that are classified as ‘recycling grade’ by sorting organisations, but that our sorting volunteers regarded as suitable for the local second-hand market. We estimate these to be two out of the seven garments sold as ‘recycling’ grade annually. The study suggests that if global production volumes continue growing, we will be increasingly destroying suitable clothing that could be worn again. The resulting publication includes specific recommendations for consumers, companies, researchers and policy makers to take clothing volumes into account in order to contribute to reductions in the overall impact of the sector (see Appendix 1).
Study 2 (Reducing clothing production volumes by design) traced the strategies proposed by sustainable fashion scholars to tackle the issue of clothing volumes, critically analysing the state of the art in the field. The systematic literature review led to 27 relevant publications including six distinctive but overlapping strategies, namely, production on demand (S1), service-based fashion systems (S2), multifunctional, transformable and modular garments (S3) design for slowness and longevity (S4), design for repairing (S5) and user involvement in design and/or manufacture (S6). The latter, which is summarized in subsequent studies as “personalisation”, is the most frequently mentioned in literature. A more detailed analysis of this strategy and the supporting evidence discussed in the publications point out that its effects have not been previously studied. Therefore, the article concludes with a recommendation to move forward from conceptual to empirical studies, not only for this strategy but also for the other approaches proposed in the literature. Analyses of existing initiatives and their results in terms of consumer buying behaviour over time and obsolete inventory are recommended as first steps towards validation.

Despite the lack of empirical evidence about the effects of clothing personalisation on production volumes, its assumed benefits have been used to promote new technology-intensive ways of designing, producing and selling garments. Study 3 (On paradigm shifts and industrial revolutions) examined the historical discourse of Industry 4.0, tracing developments in apparel production, mediation and consumption during the industrial revolution in order to discuss the possible impact of current developments in the future.

The findings suggest that the rise of ready-made garments and the decline in custom- and home-made garments were not simultaneous and therefore there was not a straightforward substitution of custom and home-made clothing by ready-mades. While availability and trade of mass-produced ready-mades was escalating since the early 19th century, it was not until the mid-20th century that custom- and home-made clothing declined among the middle class. Such a gap is explained by a steady increase in the number of clothes acquired per person: an expanding culture of consumption during the period under consideration may have enabled these different systems to flourish together. A parallelism with current developments suggests that we should not regard emerging industrial formats as substitutionary for established ones, but as complementary. We may then re-evaluate to what extent the rise of the flexible factory enables a “revolution”, a shift from a problematic present to a contrasting and desirable future. This historical overview indicates that, on the contrary, emerging product-service-systems manufacturing personalised garments on-demand must be considered in relation to – and in coexistence with- traditional industrial models.

Study 4 (From “things of imitation” to “devices of differentiation”) complemented the historical perspective above with an investigation into the changing role of uniqueness and sameness since the decline of personal dressmaking practices around the mid-20th century. New ways of clothing personalisation promise to bring back the benefits of custom-made clothing, enabling users to decide what is produced, and fine-tuning it to their taste and bodies. But, why were these benefits once abandoned? Did the people of the past not see the beauty we see today in unique things?
These questions were explored through comparative interviews with two groups of women living or working in Amsterdam during the 1950s and the 2010s. The interviews uncovered a paradoxical historical process. The clothing worn by the first respondent group during the 1950s pursued generic aesthetic ideals associated with explicit fashion trends. However, given the popularity of custom and self-making of clothes, those items were materially unique. “If you are in fashion, you matter” highlights Hendrika when recalling her efforts to adapt self-made dresses to the latest style displayed in shop vitrines. Garments worn by the second respondent group today are to a great extent the opposite. These are materially generic items resulting from industrial production, but they are chosen and used to support a distinctive personal style in line with an individual image. “This is just, me” says Lotte while explaining why she buys all those items (in her favourite colours) before they fall out of trend and are no longer available. The current contrast between people’s intentions and the materiality of clothing is particularly relevant for this thesis, as it contextualizes the re-emergence of product personalisation.

The article refers to the paradoxical process in the history of dress above as “things of imitation to devices of differentiation”, highlighting the value of the two theoretical traditions framing it in the identification of these developments. Lastly, it claims that perspectives emphasizing the social role and the technological nature of dress should be considered complementary, and that their joint application can contribute to new understandings of fashion history.

Study 5 (Assessing the impact of design strategies on clothing lifetimes, usage, and volumes) intended to advance knowledge in design for lower clothing volumes, based on the gaps identified in the literature review of Study 2. To this end, it proposed methods to test their validity taking product personalisation as a case. Building on wardrobe studies and company interviews, the study compared the performance of personalised garments with ready-made garments in terms of age, usage, influence on new product demand, and waste.

The outcomes question the environmental benefits of product personalisation. When compared with ready-made garments, personalised garments were not kept for longer time, nor were they used more frequently. Moreover, no evidence of their contribution to reductions in new product demand and waste was found. These findings confirm the need for more empirical research to understand the effect of this and other design strategies aimed at reducing production volumes. The methods advanced in this study aim at supporting this valuable line of research, leading to a more environmentally-sound apparel sector.

Finally, given differences between perceptions of clothing consumption implicit in these strategies and the ones observed in the wardrobe studies above, Study 6 (The wardrobe as a system) looked at the wardrobe as a system in order to explain these differences. By drawing a map of wardrobe structure that explains characteristics of its behaviour over time, it further discusses possible actions to reduce clothing demand. The study builds on systems theory and it is based on a creative session and a discussion group. In the creative session, designers and experts were given the task of designing fictional “smart wardrobe” services based on three levels of input. These services were translated into provocative posters and used in a discussion group with wardrobe users.
The creative challenge and the input provided sparked creativity in the design teams. A variety of elements playing a role in clothing consumption emerged during the session, contributing to the wardrobe map. While the design team embraced the concept of “smart wardrobe system” to come up with original and provocative services, the user group mostly resisted the connections of elements embedded in them by designers. We explain resistance from respondents by the fact that these fictional services oversimplify the networked structure of the wardrobe to an unwelcomed unidirectional flow, alien to natural wardrobe behaviour. The wardrobe is a system, but a much more complex system than the fictional services suggest.

Building on these findings, we draw a preliminary wardrobe map serving a variety of purposes, where inflow and outflow are independent but can be connected by feedback loops. Inflow and outflow in the wardrobe can be voluntary or involuntary, and are influenced by internal and external elements. The system stock includes a variable number of distinctive items with specific purposes organized in overlapping categories. The blurry inner structure of stock, and the variety of items included, makes the system very difficult to control, both by users and by others wanting to influence wardrobe behaviour. Reducing overall wardrobe inflow by promoting inflow of specific garments (e.g. long-lasting garments, multifunctional garments, etc.) is unlikely to have a positive effect, because the influence of each item in stock on the others is intricate and limited. Strategies operating at a symbolic level, associated with purposes and values of the system, are more likely to have an overall effect.

7.2 Discussion and implications for the research question: can design confront consumerism?

The question of design’s ability to confront consumerism has motivated much of sustainable design practice and research across product categories. A common approach has been to show how it can happen, for instance by means of promoting the design of emotionally valuable products (Chapman, 2005), highlighting alternative design practices (Thorpe, 2012), acknowledging other relationships with products that operate outside the logic of the market (Fletcher, 2016), or identifying design strategies that could facilitate a positive transition (Niinimäki and Hassi, 2011). In sum, scholars in sustainable design tend to agree in that confronting consumerism by design is possible. A main starting point of this study is to examine if this is the case.

By explicitly linking consumerism to production volumes (and therefore to its concrete environmental effects)¶, this thesis has addressed the possibility of confronting consumerism more specifically. At the same time, this specificity exposes the potential limitations of design’s capacity to achieve this. Can design, as a discipline devoted to making things (in the broader sense), help to
reduce the quantity of things made? Unmasking the paradoxical nature of this question is an underlying motivation of this research. Far from resolving this paradox with a “yes or no” answer, the results of the studies have disclosed some conceptual constructs on which agreement of design’s power to reverse ever growing volumes builds, namely **added value, promoting alternatives, and durability**. The limitations of these constructs emerged during the research, while analysing clothing consumption from historical, empirical, and speculative perspectives. The studies revealed that they fall short in explaining design’s ability to confront consumerism, because volumes or quantity are not given explicit attention. In their limitations, discussed below, we may glimpse a provisional answer to the research question: “not yet”; for the concrete effects of the approaches discussed are disproven or remain unknown.

A central conceptual construct in design for lower production volumes is that of **added value**. From this stance, consumerism is explained by a loss of engagement with things that can be reverted by developing more meaningful products for users. There are several ways to promote meaningful experiences with products, but it is users themselves who know what is valuable for them. Hence the significance of users’ involvement in design and product personalisation in the literature\(^5\), and in this thesis as a whole. In fact, previous empirical research reviewed in Study 2 confirmed a positive relation between users’ participation in design/manufacture and product value. However, as pointed out in that study, this relation has been linked to longer lifetimes and more intensive usage (and consequently lower product demand) without supporting evidence.

In Study 5 we looked for confirmation of these assumptions in 20 wardrobes and we did not find it. Personalised garments were not kept for longer time, nor used more often than ready-made garments by the same person and within the same garment type. This is the first empirical study of its kind across product categories, so the findings may apply to other sectors.

The idea that promoting engagement with things results in lower demand is furthermore contested by the wardrobes sizes reported in Studies 1 and 5, and the profile of their owners. The smallest wardrobes were found among male individuals living in rural areas of the Netherlands in Study 1 who did not show a particular interest in clothing, while the biggest wardrobes were those of females with appreciation for high-quality clothing and awareness of their environmental impact. Within the 40 wardrobes involved in Study 5, we found a positive relation between importance given to clothes and wardrobe size. These findings put the expectations of product value as a detractor of consumerism in question.

Expectations about product value and its relation to volumes assume that users need to get a certain amount of value from products, and that this can be provided by fewer products with more value or the opposite. Evidently, that does not hold true. Product value in the wardrobe is flexible and responds to the expectations of its user. Some participants of Study 5 reported an increase in new clothing demand after experiencing personalisation, possibly connected to growing importance given to clothes. This means that promoting valuable products by design can be environmentally detrimental.

\(^5\) See Study 2
Another central construct supporting design’s ability to confront consumerism is that of **promoting alternatives**. From this perspective, other ways of engagement with things can lead users to more fulfilling experiences than passive, market-driven consumption. This has been an underlying argument supporting, for example, design’s facilitation of Do-It-Yourself practices or self-production and the emerging industrial model Industry 4.0 discussed in Study 3. In fact, the interviews in Study 4 highlighted the particular performance of self-made clothes, which were common in 1950s Europe. The possibility of engaging with these garments as “things” provided their makers with “commodities” that transcend the primary function of today’s industrial clothing. However, a condition for these alternative practices to contribute to a reduction in volumes nowadays is that they substitute mainstream practices. Otherwise, they are just another enabler of the growing clothing mountain. Study 3 showed how we tend to think of new production and consumption models as substitutive of old ones, when they can actually develop in parallel, in a complementary way. Study 5 revealed that the satisfaction associated with self-production can motivate makers to produce more. These outcomes show that, once again, the relation with production volumes is more intricate than is usually assumed.

Production volumes or quantities have also been overlooked in scholarly perspectives of clothing consumption. As argued in Study 6, design strategies aimed at reducing demand assume that dynamics of clothing consumption are based on replacement and need. From this perspective, the wardrobe is a utilitarian collection with permanent volume and subject to “pull” forces, because incorporation of new garments is based on replacement of unsatisfactory pieces. The expected effect of emotional and material product **durability** on decreasing demand is based on that stance. While this may apply to some clothing items in some people’s wardrobes, this does not describe the variety of actual practices. We consume clothing for many purposes, and relationships among garments in the wardrobe are complex. The more comprehensive perspective provided by the wardrobe map in Study 6 can accommodate some of this complexity. Twenty-eight percent of the clothes stored in the 50 Dutch wardrobes audited in Study 1 had not been used in the last year. In Study 5’s follow-up of wardrobe flow, respondents explained their purchase decisions with reasons such as “I loved the colour”, “it was on sale”, “for a special occasion”, “to match my new dress”, and “just in case”. The limitations of a design focus on durability to confront these cases is evident. As Study 6 concludes, and in line with previous studies (e.g. Fletcher, 2012), only actions aimed at changing values in consumption can be expected to have an overall effect.
In sum, the relationship of design approaches to confront consumerism with volumes has been weak and implicit, hindering concrete environmental improvements. This does not mean that confronting consumerism by design is impossible, but rather that we may be putting our efforts in the wrong places. By explicitly placing volumes at the centre of the discussion we could find more promising ways of intervention. Section 7.4 proposes some potential paths for designers and researchers interested in this direction.

Reducing production volumes has important political and economic implications that have not been discussed in depth here, fundamental changes in this respect are surely needed to overcome the ecological crisis. A volume-centred framework can be linked to a variety of perspectives critical to mainstream politics and economics, while at the same time ensuring positive and concrete environmental change. In this context, attempts to influence production through consumption values, as suggested above, should always be linked back to volumes in order to evaluate actual effects. One relevant area that was not covered in this research is that of the interplay between demand and manufacture. This research reported in this thesis assumed a straightforward connection between them, anticipating a fall or rise in material production depending on developments at the consumer side. However, a far more complex relationship is to be expected.

On a disciplinary note, while placing production volumes at the centre of environmental discussions is particularly imperative in the apparel sector, the discussion above applies also to other product categories. The environmental impact of the manufacturing phase may be less prominent in other products than in clothing, but is always a relevant dimension. In fact, in building on product volumes or quantities, the field of fashion can bring relevant and novel perspectives to the bigger table of sustainable design research. Sustainable fashion has borrowed much from scholarship focused on other products such as household appliances. The work on emotionally durable design and attachment in clothing exemplifies that. But such scholarship does not usually acknowledge practices such as collecting, accumulating or impulsive purchasing. In building a volume-centric framework, sustainable fashion research can help to expand perspectives in thinking about products and the environment within the broader field. The research reported in this thesis contributes to that end.
7.3 Reflections on method and approach

The research approach discussed in section 1.3 was central in gaining new knowledge; both in the separate studies (section 7.1) and in the more general implications for the field (section 7.2). Critical thinking played a main role, starting from the research question. Rather than asking how design can confront consumerism – and therefore assuming its capacity to do so in some way– this research has taken this capacity as the object of study. Thinking critically about consumerism in the context of the environmental crisis led to the focus on volumes and consequently to question the effect of design strategies in reducing them. As a result, the studies developed novel perspectives about historical changes in clothing production and consumption and on the role of the wardrobe. Moreover–besides contesting the relationship between personalisation and lower clothing volumes specifically– they helped to advance methods than can be used to assess the impact of other strategies.

Independence was an important enabler of critical perspectives. As mentioned in the introduction, I intended to conduct this research with my heart rooted in the field of design for sustainability, but with my eyes watching from a distance. From this stance, I observed that much of sustainable design research is overlapping with practice. In other words, research has been mostly focused on finding design solutions that can tackle environmental challenges, rather than on critical reflection about solutions proposed by practitioners. While contributing to developing alternatives is certainly valuable, an important role of sustainable design as an academic discipline is left out; that of challenging practice on the grounds of scientific findings. Strengthening lines of inquiry that are more independent from practice would contribute to mutually enriching cycles of innovation.

The studies proposed conducting such critical and independent research in a multidisciplinary way, using methods stemming from a variety of academic traditions. The exact sciences approach helped to frame the overall research connecting it to the concrete issue of volumes (Study 1), to identify important knowledge gaps in the field (Study 2), to find evidence that challenges the previous state of the art, and to advance methods to look for further evidence (Study 5). The historical analysis assisted in contextualizing currently relevant issues, in bringing the topic of volumes to light, and in understanding the process behind growing rates of production and consumption (Studies 3 and 4). Lastly, the research-through-design methods provided a new perspective on clothing consumption, different to that assumed by sustainable fashion strategies (Study 6). In sum, the three approaches were found complementary and contributed to a more comprehensive analysis.
All these ways of doing research and their overlap can assist in strengthening independent and critical research in sustainable design as suggested above. In this study, the humanities approach was most valuable in problematizing concepts or relationships between them (as in the case of uniqueness and sameness in Study 4), the exact sciences in looking for evidence of assumed problems (clothing volumes in Study 1) and solutions (impact of personalisation in Study 5), and research-through-design in expanding seemingly simple notions (the wardrobe, in Study 6). However, other methodological choices would have surely led to seeing their value in a different way.

For instance, an empirical approach (such as the one used in Study 5) aimed at answering the main inquiry of Study 6 would have arguably led to a more exact representation of the structure and flow of the wardrobe, but one that considered a limited number of wardrobes only. Instead, the systems framework and research-through-design methods employed in Study 6 were considered more appropriate to start uncovering the complexity of clothing consumption, avoiding simplifications and acknowledging some of the key external elements that influence wardrobe structure and flow. This was different in the case of Study 5, which built on a relatively established line of research and where more specific hypotheses could be drawn.

Further limitations of the methodological decisions taken during the study are; a) the limited number of respondents or cases involved in each study (see section 1.3), b) the assumed straightforward link between production volumes and demand mentioned in section 7.2, and c) the fact that only one of the design strategies identified was empirically tested, while the research question addresses the ability of design to confront consumerism in general. Having said that, the findings of the empirical study exposed the constraints of other strategies too; for example, they contested the relationship between durability and volumes, on which other strategies build. Moreover, the conclusions of Study 6 explain why actions operating at a garment level (all strategies reviewed, except S2) are unlikely to have an impact on overall demand.

Lastly, the relevance of this research is strongly embedded in the environmental dilemmas of contemporary Europe. Although rising clothing volumes are a global issue, its implications vary according to specific geographical contexts. The connotation of personalisation in clothing is surely different in other areas of the world where it is common practice. Other matters discussed in the studies, such as the structure and behaviour of the wardrobe and the paradoxically changing nature of garments during the last 60 years may not apply to other regions at all.
7.4 Future research paths and recommendations for practitioners

The **contribution of this research** to the field of (fashion) design for sustainability is manifold, it highlights:

- the value of clothing volumes as a framework to discuss the environmental burden of the sector and the suitable actions to tackle it, pointing out the limitations of other concepts that are used to this end (e.g. impact per garment, added value, promoting alternatives, and durability).

- the lack of empirical research on the effects of design actions to reduce volumes, showing that they may not lead to the expected results, and proposing methods to advance knowledge in this direction.

- the implications of technological shifts in clothing production and consumption hindering or enabling product personalisation, exposing how partial historical visions are used to support the environmental value of technological innovation.

- opportunities for the field of fashion studies to diversity its theoretical framework, promoting a variety of perspectives that help in discussing the challenges of the sector in terms of sustainability.

- the value of systemic perspectives on the wardrobe to understand clothing consumption in line with its complexity.

- opportunities for sustainable design research to develop a stronger independence from practice, contributing with critical reflection on design actions and consequently driving progress further.
This contribution, and the limitations of this study already discussed, opens up potential paths for further research, which are discussed below:

• **map volumes**: Study 1 revealed lack of knowledge and inconsistency in data available about clothing volumes. Mapping developments across regions and during time is a first step to identifying problems and opportunities.

• **uncover interplay between production and demand**: This study assumed a straightforward link between production volumes and demand, but a more intricate relationship is to be expected. An investigation of how volume related decisions are taken across the supply chain, and how these relate to demand, is highly relevant.

• **elaborate on the relationship between volumes and other related concepts**: Understanding the impact of added value, promoting alternatives and durability on volumes for specific consumer groups and garment types would bridge important knowledge gaps in the field, leading to more impactful strategies.

• **explore other product categories**: Clothing is particular in the way it is purchased, kept, and used, but other (collectable) product types may present similar characteristics. Volumes could also provide a valuable framework to study the consumption of, for instance, jewellery, toys, kitchen accessories, tools, office materials, and their environmental impact.

• **conduct empirical studies to assess the impact of other strategies**: A particular strategy that has not been covered in this thesis is that of clothing services offering alternative ways of ownership (strategy 2 in Study 2). The methods proposed in Study 5 could be used to test this and other future strategies, as well as to repeat the study with different respondents.

• **assess the environmental effects of digitalisation**: As shown in Study 3, innovation in the realm of the digital is usually assigned positive environmental effects associated with dematerialisation and falling resource use. However, a comprehensive assessment should consider to what extent these innovations replace material production, and they should include the impact of the whole system involved (energy-use, servers, devices, etc.). Such studies should be central in contemporary design for sustainability research. In fashion, digital prototyping is expanding rapidly and its environmental advantages are often emphasised. Knowledge about the impact of these developments is very much needed.
• **understand the wardrobe(s):** Study 6 outlined a general structure of the wardrobe, but a great variety in wardrobe structure, behaviour, and flow is to be expected. Studies 1 and 5 showed how diverse wardrobe volumes can be. Understanding the relationship between people’s lives, the structure and behaviour of their wardrobes, and the characteristics of the garments included, would be valuable in developing specific strategies aimed at reducing clothing demand.

• **develop further independence from practice:** The literature reviewed in Study 2 pointed out that design strategies aimed at reducing volumes have been developed and promoted without empirical validation. One reason may be that the sustainable fashion community is strongly embedded in practice, and consequently studies aim at proposing solutions rather than reflecting on the solutions proposed by designers. Independence from practice, and critical reflection on it, would encourage designers to work further and ensure positive impact. Critical research can be conducted in many ways, as the studies compiled in this thesis intended to show. This does not entail leaving design practice aside. In Study 6, for instance, design practice was used as a means to generate new knowledge; not by proposing concrete solutions but by using design prototypes to provoke discussion.
Additionally, the outcomes of the studies present a series of design challenges, the associated **recommendations for sustainable fashion practitioners** are:

- **take a volumes-centric approach:** Designers have proposed a variety of product-centric solutions to the challenge of volumes. They have intended, for instance, to design more meaningful, durable, or useful garments to diminish new product demand. However, this research has highlighted the limited efficacy of such actions. Bringing more garments into the world is unlikely to revert the situation. Those committed to reducing the impact of the sector are encouraged to use their creative skills to find other solutions.

  Guiding questions:  
  *What skills have you gained during your education and practice so far? How can you use some of those to propose actions (communication campaigns, educational experiences, events, etc) that help tackle the issue of volumes?*

- **take a wardrobe-centric approach:** One reason for product-centric initiatives being insufficient is that the wardrobe does not usually follow the logic of product replacement. Durable or meaningful garments may stay for a long time in the wardrobe, but that does not stop other garments being produced and purchased. Designing specific garments with the dynamics of specific wardrobes in mind may open new opportunities.

  Guiding questions:  
  *Can you identify the logic of your own wardrobe, the relation between garments, and the way they flow over time? Do other wardrobes follow a similar logic? Is it possible to design for lower volumes with that in mind?*

- **focus on the production and purchase phase:** Sustainable fashion solutions tend to focus on the problem of waste (disposal phase). But most of the environmental impact of clothing is concentrated in the manufacturing phase, so solutions should build on reflection about production and purchase.

  Guiding questions:  
  *Why do people want to produce and consume more clothes? What design solutions can be proposed to reduce that?*

- **learn from the minimalists:** Behavioural change has been an important approach in sustainable design. However, research shows that in people’s lives things do not always happen as designers expect. Building on the input of people already owning small clothing volumes may be more promising than trying to change the behaviour of those that are not interested. In our wardrobe studies, respondents owning the smallest wardrobes were either not “into” clothing, or they had made a conscious decision to own less.

  Guiding questions:  
  *How can the daily clothing practices of these people be supported by design? What kind of garments do they miss, that would support their lifestyle? How can their story motivate others?*

- **a project is never finished when you want to change the world:**  
  *In any case, keep in mind that the effect of your initiatives may not be aligned with your initial intentions. Try to run a small pilot of your solutions in real life to see unexpected effects, and always reflect on your practice by observing its results over time.*
7.5 Publications produced during the PhD trajectory


References


