Natureculture Origined
An intersectional feminist study of notions of the natural, the healthy and the Palaeolithic past in the popular science imaginary of biomechanics

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ABSTRACT

Situated in a time of advanced technoscience and new materialist feminist humanities/social sciences, this thesis explores how popular science renditions of biomechanics contribute to transforming imaginaries about “the natural” and “healthy”. It does so by zooming in on biomechanical scientist Katy Bowman's pervasive and life-style commitment-requiring teaching. Her books and online material conceptualise and connect a bodily dependency on adequate physical load environments to an imagined natural health of our Palaeolithic ancestors. Drawing on several postconventional fields gathered under the banner of feminist posthumanisms and posthumanities (Braidotti 2013; Åsberg 2014), this thesis demonstrates how gendered and otherwise intersectionally interpreted fantasies intra-act with Bowman’s specific bodily practices, constructing a natural with both limiting and liberating consequences. Notions of the natural in popularised biomechanics are here explored foremost with a focus on the formative categories of gender and class. More explicitly, the thesis shows how Bowman’s teaching, on the one hand, links well with theorisings of corporeal, environmental and material feminist scholars, such as Elizabeth Grosz’s (1994) and Stacy Alaimo’s (2010) notions of environed corporeality and trans-corporeality. On the other hand, though, Bowman’s popularised biomechanics simultaneously reinforces a troublesome nature-culture divide and neo-liberal discourses on health as choice. However, while downplaying sociocultural and economical factors, and underpinning essentialist notions of motherhood, Bowman’s popular science also destabilises masculine understandings of the natural as tough; acknowledges material, individual and collective agency; and, offers effective techniques for managing various health conditions – all in ways that may well be interpreted and practiced within feminist registers. Based on this example from Bowman’s popular science, the author argues that contemporary Western understandings of the natural are influenced by a longing for self-commitment, control and connectedness.

Key words: gender, class, corporeality, intersectionality, feminist cultural studies, biomechanics, popular science.
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>2</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>5</td>
</tr>
<tr>
<td>1 INTRODUCTION</td>
<td>6</td>
</tr>
<tr>
<td>Situating imaginaries and the natural</td>
<td>7</td>
</tr>
<tr>
<td>Aim and research questions</td>
<td>9</td>
</tr>
<tr>
<td>Katy Bowman and her popular science of biomechanics</td>
<td>9</td>
</tr>
<tr>
<td>Finding and following Katy Bowman</td>
<td>12</td>
</tr>
<tr>
<td>A research context</td>
<td>15</td>
</tr>
<tr>
<td>Intersectionality</td>
<td>15</td>
</tr>
<tr>
<td>Nature revisited</td>
<td>16</td>
</tr>
<tr>
<td>Between science and popular culture</td>
<td>19</td>
</tr>
<tr>
<td>Turning to imaginaries</td>
<td>19</td>
</tr>
<tr>
<td>Posthumanist companions</td>
<td>20</td>
</tr>
<tr>
<td>Material, methods and ethics</td>
<td>22</td>
</tr>
<tr>
<td>Outline of the thesis</td>
<td>27</td>
</tr>
<tr>
<td>2 PALEO FICTIONS</td>
<td>28</td>
</tr>
<tr>
<td>Entrance: once upon a time</td>
<td>29</td>
</tr>
<tr>
<td>The Palaeolithic imaginary</td>
<td>30</td>
</tr>
<tr>
<td>Building support for a contemporary metanarrative</td>
<td>33</td>
</tr>
<tr>
<td>Persuasive pervasiveness</td>
<td>34</td>
</tr>
<tr>
<td>Exit: creating the natural</td>
<td>43</td>
</tr>
<tr>
<td>3 NATURAL RESPONSIBILITIES</td>
<td>44</td>
</tr>
<tr>
<td>Entrance: implications</td>
<td>45</td>
</tr>
<tr>
<td>Viscous bodies</td>
<td>47</td>
</tr>
<tr>
<td>Controlling the outcomes</td>
<td>48</td>
</tr>
<tr>
<td>Health as duty</td>
<td>52</td>
</tr>
<tr>
<td>Intersectional consequences</td>
<td>56</td>
</tr>
<tr>
<td>Class</td>
<td>56</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Gender as choice</td>
<td>60</td>
</tr>
<tr>
<td>Proper motherhood</td>
<td>61</td>
</tr>
<tr>
<td>De-masculinising the primitive</td>
<td>68</td>
</tr>
<tr>
<td>Acknowledging agency</td>
<td>72</td>
</tr>
<tr>
<td>Collective actions</td>
<td>74</td>
</tr>
<tr>
<td>Exit: moralising conceptualisation, liberating tools</td>
<td>76</td>
</tr>
<tr>
<td>4 CONCLUSIONS</td>
<td>77</td>
</tr>
<tr>
<td>Twisting</td>
<td>79</td>
</tr>
<tr>
<td>Now what?</td>
<td>83</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>85</td>
</tr>
<tr>
<td>Printed sources</td>
<td>85</td>
</tr>
<tr>
<td>Internet sources</td>
<td>85</td>
</tr>
<tr>
<td>Bibliography</td>
<td>89</td>
</tr>
</tbody>
</table>
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INTRODUCTION

Katy Bowman: So natural movement [...] would be the frequency, and the distribution, and the load profiles, which are all those movement nutrients that come from doing things in a particular way. [Movements that] are distributed throughout a day, throughout a week, throughout a lifetime, in the way that they would have occurred in nature. And I don’t think that there’s a way, really, to get back to that. However, I think that there’s a way to get a lot closer than we have been.

Podcast host:¹ This is a good time for our eye-break. Would you remind us what an eye-break is?

Katy Bowman: An eye-break is a chance for you to use the muscles in your eye that are held in a cast by the distance, the farthest thing that’s from you. Like if you’re looking around your house, or looking around outside, you’re probably looking at a fixed distance, you know, anything about five and twenty-five feet in front of you, and that is like having a cast on your arm; in the same way that you’re muscles atrophy in your arm, they atrophy in your eyes, by always looking at things that are close and inside. So, an eye-break is a chance to look – go to a window, go outside. Look at the farthest thing away from you and just let everything in your face, in your eyes relax, because in order to focus on that far away thing the muscles in your eyes have to release. [...] 

Podcast host: Excellent. So everybody could just stop. Go and take your eye-break. We will be here waiting for you.

Katy Bowman: [...] A way that it would have occurred naturally, is because you’re actually looking for things that are far away. You’re trying to become aware of your environment for safety’s sake. [...] Context always helps. I don’t want you to be relaxing your eyes because Katy says so. [...] You’re doing it because you understand that your biological system requires it. [...] You’re trying to change your relationship, ultimately, with your environment – you’re trying to change your habitat, if you will.

- Katy Bowman and Dani Hemmat, Natural Movement (2014a: 18.50)

¹ In this excerpt from Katy Bowman’s podcast episode on natural movement, I have chosen to exclude podcast host Dani Hemmat’s name in order not to draw attention from Katy Bowman, the work of whom is the subject of this thesis.
This intersectional feminist study explores notions of the natural within popular science renditions of biomechanics. More specifically, the focus of this thesis is on how popularised biomechanics conceptualises a natural and healthy body in a natural and healthy environment. My approach is to zoom in on contemporary biomechanical scientist Katy Bowman’s work. Her popular science is mediating a comprehensive life-style and exercise program aimed at lay people, who search to improve or cure various widespread health conditions and ailments. It is a full-on popular science and life-style prescription that simultaneously emphasises our bodies’ affectedness by their everyday load environment, and the natural as closely related to movement habits of a primitive and ancient past.

In hers and Dani Hemmat’s podcast episode on natural movement, which the quote on the previous page is from, Bowman stresses how we have become too used with associating movement with exercise. According to Bowman, while most kinds of movement are better than not moving at all, standard exercises do not even closely meet our bodies’ wide-ranging movement-requirements. We need, Bowman says, to move all-day long and get in more kinds of movements, including those that involves the muscles in our eyes. These movement patterns matter, she argues, because of our bodily relation with transformative physical forces that get imposed on us through gravity, movement, and clothing. Bowman describes how our tissues continuously adapt to the loads they are exposed to. This implies, she stresses, that we need to understand common illnesses and diseases as being due to the casting that our contemporary lifestyle imposes on our bodies.

I have followed Bowman’s work with a mixture of excitement and frustration on my journey to recover from a chronic pain condition. Her teaching has helped me feel better and many of her explanations overlap with those I have learned through my engineering background. There are also intriguing correspondences between Bowman’s popularised biomechanics and much feminist understandings of the human body as intrinsically intertwined with its sociocultural and physical context. Yet, there are simultaneously gender- and class-related aspects of Bowman’s teaching that have been harder for me to assimilate, such as her neo-liberal emphasis on personal responsibility and essentialist understanding of

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2 Intersectionality is a concept that captures how time- and location-specific norms and power differentials are constructed through an interplay of discursive categories, such as gender/sex, class, race, ethnicity, geo-political location, nationality, dis/ability, sexuality, age, etc. (Lylke 2010: 50, 208). I discuss this term in more detail as part of the presentation of this thesis’s theoretical framework, A research context.

3 Biomechanics is a science that studies how physical forces affect living structures, such as the human body (Hall 2012: 2).
motherhood. My personal and highly bodily experiences will form a frame for my analysis of Bowman’s work. However, the aim of this study is to explore Bowman’s work as an entrance point to a wider contemporary concern.

Because, Bowman’s popular science of biomechanics offers insight into the landscape of new understandings of the natural that have emerged through recent parallel shifts of focus within the natural sciences and the feminist humanities/social sciences. Through fields such as epigenetics and microbiomics the natural science gaze has been lifted from the singled-out gene and seemingly bounded human to the outer, contextual world of the cell and the porous character of bodies and their organs. Meanwhile, recent streams within the feminist humanities and social sciences highlight how matter and other physicalities, rather than constituting a passive resource for sociocultural inscription, have agencies of their own. The traditional polarised nature-culture debate has begun to erode. Yet, what the topography of competing and contemporary conceptualisations of the natural specifically looks like is fairly unexplored.

There are three main reasons to why Bowman provides an adequate entrance point to this terrain. Firstly, she draws on an epigenetic field that is part of the mentioned contemporary natural science focus, yet still rather unknown; she conceptualises our bodies as in crucial and dependent relation to an everyday environment of physical loads. Secondly, Bowman’s work constitutes a new form of popular science, partly enabled by online and social media. Rather than mere pastime, escapism, or entertainment, her teaching requires a whole life-style commitment. Thirdly, the hands-on practices surrounding the imaginary in Bowman’s teaching make the bodily effects of these discursive formations and fantasies on the natural less hidden. While imaginaries are the main focus for this study, I have attempted at using a mixed methods approach that combines feminist cultural studies tools with self-narrative elements. I draw on my own, two year long, experience of recovering from a chronic pain condition by following Bowman’s life-style and exercise program. In doing so, my hope has been to get at some of the specific and tangible ways in which collective understandings of the natural and healthy relate to a materiality with agency and limitations.

Finally, in a limited study like this, concentrating on Bowman’s teaching has been a way to get deeper in my analysis. An engagement with several actors would have required me to limit the analysis of each of them severely. Furthermore, if I had focused on anybody else, I

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4 Epigenetics focuses on how environmental factors affect gene activation, i.e. “how cells ‘read’ genes” (Icahn School of Medicine at Mount Sinai 2015), whereas microbiomics concern the role of bacteria, viruses, fungi and other microbes in the human body’s physiological processes (Bain 2014: 8).
would not have been able to draw on neither as much material nor on my own corporeal experience, which my intensive and long-term engagement with Bowman’s teaching has enabled. My ambition with this study has not been to fully account for the larger landscape of contemporary understandings of the natural, but to explore one of this landscape’s influential contributors.

**Aim and research questions**

Due to the multiple outlined reasons above, my overarching aspiration with this thesis has been to examine some of the mechanisms, effects and motivations involved in a currently transforming topography of notions of the natural and the healthy. To achieve this aim, I have engaged in a selection of biomechanist Katy Bowman’s popular science material under the guidance of three core research questions.

The first two questions are empirical and reads: *how do Katy Bowman and her popular science of biomechanics imagine the natural and the healthy; and, how can these understandings be interpreted from intersectional feminist perspectives on class, gender and corporeality?*

My third and overarching theoretical question is: *with these examples from Katy Bowman’s popularised biomechanics, what can be said about how we in contemporary Western time understand our bodily relation to our environment?*

**Katy Bowman and her popular science of biomechanics**

Katy Bowman is the founder and director of the Restorative Exercise™ Institute, through which she since 2003, by means of various online and physical platforms, teaches a comprehensive epigenetics-referencing and Palaeolithic age-inspired life-style and exercise program that focuses on how to move for optimal health (*Restorative Exercise Institute* n.d.).

Bowman clearly and openly situates herself in relation to her teaching. She foremost emphasises her scientific degree in biomechanics; an academic field that she defines as “the

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5 While West is an unstable and imprecise term, I find it necessary to use it “because we need to define what we are doing using a common language” (Koobak 2013: 35). With this term I do not refer to a clearly defined geographical region, but rather to a discursive category that tries to capture certain thoughts and ideologies that tend to dominate over the thoughts and ideologies of other parts of the world.
study of living structures ([she] stud[ies] the body) and how the forces created and placed upon them affect how they work” (Bowman in Saint-Paul 2014). However, in the promotion of her self-designed Restorative Exercises and message on “natural movement”, Bowman also stresses her experience of living an inactive life until her late teens; and, her intense training years in her twenties (Bowman 2014a: 43-45, 201). She thus talks to us simultaneously as an expert, with specific academic and practical knowledge about how our bodies relate to various forms of physical forces, and as a regular woman who shares many of her audience’s bodily experiences.

According to Bowman, our bodies cannot withstand the contemporary life-style of the majority of the industrialised world’s population (Bowman 2011a; Bowman 2014a). This lifestyle does not, she argues, even closely meet our bodies’ requirement of all-day, all-muscle-use movement; a requirement she holds to be determined by the way humans lived during the larger part of our evolution. Bowman teaches us that the lack of these essential movement patterns is the root cause of the epidemic of so called affluent diseases and pain conditions (ibid.).

At the core of Bowman’s teaching is how our everyday physical load environments literally shape our bodies. How we sit, stand, walk, what we wear, what surfaces we move on, or in what furniture we spend our time, impose distinct loads on our bodily cells, which, Bowman teaches us, significantly affect how our cells act (ibid.). Our contemporary sedentary life-style deprives us, it says on her website presentation, of “specific mechanical stimulation” which causes “our cells […] to behave erratically” (Restorative Exercise Institute n.d.). But it is not only the sedentariness per se that is the problem (Bowman 2014a). According to Bowman, much of the problem is held to stem from the limited ways in which we load our bodies, due to being sedentary in a particular and unvaried way. For example, she argues that as we sit in the same kind of positions – in chairs, sofas, and car seats – the bulk of the day, the muscles in our calves, hamstrings, hips and backside of the neck get shortened so that they alter the way we can move when we eventually do get out of our furniture. According to Bowman, this altered shape and limited range of motion in turn has the effect that the loads acting upon us anew become inadequate for many bodily functions, not the least for waste removal. Thus, she encourages us to gradually transitioning out of furniture, bulky shoes, bras, and other “unnatural” items to a life-style that incorporates more of the imagined loading patterns of our hunter-gatherer ancestors. By making these changes to our every-day movement habits, we will, she stresses, notice big differences in terms of bodily health (ibid.).
Bowman’s teaching is gaining increasing impact. According to herself, her blog has gone from fifty to hundreds of thousands of readers in only a few years time (Bowman n.d.-b). Recently she has been interviewed in more and more news magazines and television shows with large audiences (e.g. Fox News 2014; Toronto Sun 2015), as well as online health fora and blogs (cf. Thomas 2013; Saint-Paul 2014).

This success is intimately related to Bowman’s communication skills. Despite the level of details in her accounts on the mechanical influence on our bodies, Bowman’s material is never difficult to understand, due to her accessible and catchy style. She does seem to have experimented with how to present herself for her lay-people audience. For example, in Bowman’s earlier productions, such as her DVD series (Bowman 2009), she was dressed in more business-like clothing than the comfortable and non-movement-restricting blouse and pants that she appears in on the blog cover picture on her new website (Katy Says n.d.). However, throughout her self-made career, she has continuously taught her ideas with an easy-to-read language, puns, and clarifying metaphors and similes. In addition to her DVD series, blog, podcast, online training videos, and several written books, Bowman is also active on social media channels, like Twitter and Facebook. Besides linking to science and popular science articles, and to her own material on her other platforms, she also uses these channels to answer her readers questions, not only those relating to her own production but also those that regard various claims made by other health-profiling actors.

Another way Bowman spreads her concepts and bodily practices is through her comprehensive education of Restorative Exercise Specialists, who after their certification can work with own clients on improving their stance and gait through specific stretching and strengthening exercises. Some of these specialists also appear in public contexts where they forward Bowman’s words; not only on their own websites and blogs, but also on various convents and in news magazine interviews (e.g. in the Washington Post, Plunkett 2015). A significant factor in Bowman’s theories and techniques becoming more well-known is probably also that many of the Restorative Exercise Specialists incorporate and combine them with their own professional work, such as doctors who give Bowman’s advices and exercises to patients with pelvic floor disorders and pilates practitioners who modify the instructions in the positions and movements they teach (cf. Wittman n.d.; Movement Monkey n.d.). Great deals of the specialists have also chosen to certify after finding that Bowman’s teaching helped them get rid of their own chronic pain conditions, the accounts on which also help Bowman gain popularity (e.g. McLaughlin n.d.; McLaughlin 2015; McCoid n.d.; Rude n.d.).
As I will explain next, this experience of wanting to devote oneself to Bowman’s theories and practices after such a significant change in one’s own quality of life is what has moulded much of my own relation to Bowman’s teaching.

Finding and following Katy Bowman

I got to know about Bowman’s work due to my chronic pain condition. While experiencing it now and then during my teens and early twenties, my lower back pain began to bother me more extensively in my mid twenties. It was triggered by many factors. At the time I trained at a new gym where I was not familiar with the equipment. In a leg press I could feel the all the weight pressing down my lumbar spine. However, during the time I also started to work on my master thesis in engineering, which meant much more regulated work-days with extensive sitting. My pain remained after my graduation when I spend my hours sitting still in front of a computer in a chilly open-plan office. I tried several different physiotherapists. However, the exercises I was given only intensified the pain. After a couple of years I had given up my gym training and jogging, and I was unable to walk any distance or sit or stand comfortably. Eventually I had a year of hope. I was referred to a Feldenkrais therapist that helped me relax and move stiff areas by her manipulation and self-help techniques. I also was given a standing desk at the office. Yet, not long after I took leave from work to go to a creative writing school the problems came back, and now they also involved my upper body. For this new condition the former technique no longer offered any efficient relief. I got numb fingers, headaches and nagging and energy-consuming pain throughout most of my body. For a couple of months I was unable to participate in the writing exercises at my school and perform my part-time job. I felt miserable and anxious that this would be the way my life would be like forever. Would I ever be able to write again; would I be able to work? How should I make a living if I could never use a computer again? While this condition slowly lingered into a more manageable state, pain was always present and I had to constantly plan how I performed my daily tasks, especially those related to my job and the writing that I loved.

The years that followed I continued to search various professionals. In addition to numerous amounts of physiotherapists, I have visited several doctors. A couple of years ago I asked to be referred to a multi-modal pain rehabilitation program in the hope that this would be the site for a more thorough investigation of the causes behind my condition. However,
this showed not to be the ambition of the program. Theoretically I appreciated the multidisciplinary approach that enabled the group of pain-suffering individuals I was in to learn some of the mechanism behind pain, relaxation and acceptance techniques to better cope with chronic pain, as well as hands-on advice on ergonomics and micro-pauses. Yet, the exercises I was offered either increased my pain or made small difference. Rather than really improving my condition, I got reminded of all the things I could not do, which emphasised my overall feeling of being worn out and beyond rescue – old at the age of thirty-three. After persistent appeal to my doctor, I finally got a magnetic resonance camera screening (which showed a bulging disk and bone spur in my neck) and referral to a rheumatic specialist (who concluded that I did not have rheumatism), which all ended in the advice to work with the same physiotherapy that I had unsuccessfully tried for years.

In addition to the traditional health care system I have also tried various alternative treatments. While a few of them enabled me improvement in some parts, they always simultaneously increased some other problem area in my body or caused new ones. Eventually I looked for training regimens with bases in other countries and bought exercise programs over the internet. It was when I contacted the distributor of one of these programs regarding an exercise that intensified the very same low back pain that it promised to release that she directed me to Katy Bowman’s teaching. Bowman, she wrote, was good at explaining and handling how the whole body was interlinked and functioned.

There were two things that spoke to me in Bowman’s teaching. First of all, many of the Restorative Exercises she teaches remarkably and instantly changed my level of pain. While these stretches and strengthening exercises often reminded me of workout elements I had done before, Bowman paid attention to details in her instructions that made significant difference in terms of pain relief. Secondly, I enjoyed the explanations Bowman gave, such as how too short muscles are just as weak as too long ones; how one could have too short muscles although one perceive of oneself as flexible; how raising the rib cage to get a straight posture increases the compression of the spine, bypass shortened chest muscles, and contributes to a relative forward positioning of the head. Bowman’s teaching resonated with a general trait of mine wanting to do things neatly and accurately. After being given so many solutions with vague or unexplained rationales from other health professionals, I liked being given in-depth descriptions on how and why certain exercises worked. The engineer in me also appreciated the mechanical model used to describe forces’ influence on bodily structures. Physical quantities, like loads, deformation, intensity and frequency, were all familiar to me from my own mechanical engineering education. The application of them to bodies seemed
very logic and tangible. I was hooked, and eventually went along and bought the certification-preparing Whole Body Alignment course (Bowman 2011a) to learn more.

While I still appreciate Bowman’s theories and bodily practices for the above reasons, my conception of her teaching has however gradually come to be characterised by ambiguous feelings. While several of the Restorative Exercises did help me limit my pain substantially, just as many for long tended to increase it or cause new types of uncomfortable sensations. This was indeed familiar to me from other treatment programs. However, Bowman’s universal explanations and emphasis of such pain as having to do with either failure to perform the exercises correctly or me pushing beyond my, by inadequate habits, self-caused limitations, made me feel under-achieving, lonely, guilty and ashamed. Furthermore, I have found Bowman’s comprehensive suggestions on life-style changes hard to combine with the other importunate and messy ingredients that come with studying a masters program in gender studies, being a parent, a partner and a friend, as well as being in a constant stream of other contemporary happenings. Not only is it hard to find the time for Bowman’s recommended doses of walking and Restorative Exercises, or to get used to other people’s curious scepticism or clear condemnation on the choice to give up our family’s sofa and bed. Bowman also encourages people to make continuous skeletal adjustments in their every-day go-about, do exercises while working at the computer, and emphasises the potential impact various habits may have on children’s long-term bodily functions. Health indeed has become a rather comprehensive and demanding undertaking. Thus, while, Bowman’s conceptualisation of a relational and dependent relation of bodies to their everyday environment indeed corresponds with the new materialist understanding of bodies that I fascinatedly have learned more about through my master program in intersectional gender studies, the feminist in me still hesitates to fully embrace Bowman’s world due to her neo-liberal and essentialist strands.6

At this date, I have followed Bowman’s teaching in various degree of orthodoxy for almost two years. During this time, I have gradually transitioned to another way of working at my computer. Instead of sitting so much on chairs I try to alternate between various seated

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6 New materialism is a heterogeneous theoretical movement that shares an understanding of the world as co-constructed by sociocultural forces and material agencies (Lykke 2014: 5; Lykke 2010: 209; Åsberg, Hultman, Lee 2012: 30-32). De/constructionists alike, new materialists emphasise how discourse and language produce meaning. Thus, they resist cultural essentialism and biological determinism. Yet, new materialists also insist that matter, environments, and other physicalities are not simply a passive resource that the sociocultural world forms, but facticities that are not possible to completely control (ibid.). In the next subchapter, A research context, I present different new materialist theorisings that have inspired me in this research process.
and standing positions on the floor. I also strive to do some of Bowman’s stretching and strengthening exercises while I type and to split up my workday with pauses to hang on our monkey bar. In addition, I take regular and frequent walks, work on transitioning to minimal footwear, use less movement-restrictive clothing and sleep on a thin mattress on the floor. I feel stronger and more comfortable in my body than I have done for a very long time. Yet, there are also many more things in my life now to continuously consider. Bowman keeps making me both bewildered and intrigued. Recently, I decided to go along and enrol in one of the certification weeks next year. I want to learn more. I want to get closer to Bowman’s exiting world. I want to understand and sort out my confusions.

By exploring the notions of the natural and the healthy in Bowman’s popular science of biomechanics from an intersectional feminist perspective, this thesis has constituted another step in my attempt to unravel some of my ambiguities with regards to Bowman’s teaching.

**A research context**

In order to facilitate the reading of my analysis of Bowman’s work I will in this section introduce the web of thinking tools and scholarly fields that have influenced this study. As I have already mentioned, the topography of new understandings of the natural is an unexplored research area. Thus, I cannot present a review on previous inquiries. Yet, as I will discuss further down below, there are many theorisings on the natural that are of relevance for this study and that have provided adequate input to its framing.

**Intersectionality**

I will, however, begin by first addressing the concept of intersectionality, which has been of importance for this study’s focus on how notions of the natural and the healthy are bound up with discourses on gender and class.

Intersectionality refers to how identity construction, power differentials and oppression evolve through an interplay of multiple discursive categories, such as gender/sex, class, race, ethnicity, geo-political location, nationality, dis/ability, sexuality, age, etc. (Lykke 2010: 50, 208). The term was coined by Kimberlé Crenshaw (1991) to address the specific form of oppression experienced by black women in the US labour market, but has genealogical roots in several strands of feminist thoughts (Lykke 2010: 71, 75-76). Already in the nineteenth century, former slave Sojourner Truth held a speech at a convention for women’s rights,
addressing her exclusion from a white women’s feminism (2010: 76). Around the same time, parallel European feminist and socialist movements led to discussions on how class and gender intersect (ibid.). And, to pick a third of many examples, the Combahee River Collective (1977) articulated the importance of considering the interconnectedness by race, gender, class and sexuality and other forms of oppression in the nineteen seventies USA. Today, intersectionality has become an integral part of most feminist theorisings (Lykke 2010: 49-50).

Many poststructuralist and other feminists have however problematized the term intersectionality (2010: 73). The metaphor of a crossroad tends to, they argue, ignore how various forms of formative categories mutually transform each other. Where roads can come together and depart in their initial forms again, discursive categories shape identities and power-relations in intertwining ways that makes it deceptive to talk about them separately (ibid.). I want to underline that I, although I use the term intersectionality, share this understanding of an irreducible coming together of various forms of categories. Yet, in the communication of my work I see a value in deploying an established word that, while being discussed and defined in slightly different ways, signals an overarching common conception of the construction of power differentials and limiting normatives.

In the study of Bowman’s popularised biomechanics, I have chosen to foremost explore how notions of the natural and the healthy intersect with class and gender. In accordance with the emphasis made by several poststructuralist feminists of the importance of not a priori deciding what categories should be prioritised (ibid.), I have aimed at making my selection of categories based on the concerns that have emerged through my engagement with the material. While Bowman emphasises how a sociocultural and physical world shapes our bodies via the loads it imposes on us, she also embraces a neoliberal understanding of health as individual choice. In this, both personal responsibility and motherhood are at the centre stage. For these reasons, I have found gender and class to be of important and urgent value for my analysis. As I discuss below, I also argue that the environment can be included as a category within intersectional feminist studies and have aimed at doing so in my analysis.

**Nature revisited**

In my exploration of Bowman’s conceptualisation of the natural I have been inspired by the recent ontological, new materialist, shift within gender studies and several other scholarly fields. This is a shift that both moves into and beyond the theorisings of de/constructionism,
i.e. a transition that aims at simultaneously paying attention to the impact of sociocultural aspects and to non-human agencies (Lykke 2010: 209). Below, I will present four feminist materialist theorists, who offer, for this thesis highly adequate theorisations on nature and the natural. Thereafter I will conclude with a short account on why I, motivated by other feminist scholars, argue that the environment is an important part of intersectional gender studies.

Feminist biologist and science and technology studies scholar Donna Haraway describes the de/constructionist outlook on science and nature as both enabling and risky (Haraway 1989: 6). On the one hand, Haraway points out, deconstructionism has given valuable insights into how discursive practices within science form our conceptions of various phenomena, including the physical and material world. Nature, she says, is indeed, just like deconstructionists argue, often referred to in circumstances where there is a need for social occurrences to appear as given (1989). Yet, she writes, while science is indeed to be regarded as discourse, it also “grows from concrete ways of life” (1989: 8). Haraway thus, along with other new materialists, objects the de/constructionist tendency to put the physical aspects of reality within brackets, and she refuses to conceive of nature as a passive resource over which human ideological forces have full power (Lykke 2010: 115-116).

With her concept natureculture Haraway (2003) carves out a new position that rejects the Western nature-culture dichotomy – the common foundation for realists and deconstructionists – all together (cf. 1989; 2003). The world, Haraway argues, continuously co-creates itself through a dynamically changing intrinsic intertwinement of matter, discourse and semiotics. This means that what is commonly referred to as a pure and static nature is just as context-dependent as culture; corporeality and nature are – and always have been – influencing and influenced by historically and locally specific power-loaded sociocultural structures. For Haraway then, the cultural essentialism and biological determinism of conventional materialists – of realists – can be counteracted without biology having to be reduced to a blank page for social inscription (Lykke 2010: 116).

Haraway’s rupturing of contrasting depictions of nature and culture has influenced feminist physicist Karen Barad (2007), who, in addition, draws on queer theorist Judith Butler and quantum physicist Niels Bohr in her argumentation for the universe’s performativity. Rather than static and objectively observable objects, the world is, Barad argues, dynamically created and transformed through intra-active meetings between bodies, nature and discourse. By coining the concept of intra-action, Barad differentiates from inter-action, in which separate objects come together before they then depart again in the form of their previous integrity. According to Barad, these sorts of stable confines between bodies and nature or
nature and social meaning-makings do not exist. Every phenomenon, physical as well as social, becomes in the very meeting of these non-bounded temporal entities; entities that through their collision are transformed into something new, just as temporal.

Environmental humanities scholar Stacy Alaimo (2010) employs Barad’s concept of intra-action in her development of her thinking on human’s bodily relation to a world of many other co-existing life forms. With her concept of *trans-corporeality* Alaimo underlines how all humans are intermeshed with other human and non-human bodies through a fleshy and transgressing environment. The environment is thus not an “inert, empty space or […] a resource for human use” but something that constantly transforms both itself and us (Alaimo 2010: 2).

That bodies are not separated from their context is something corporeal feminist Elizabeth Grosz (1994) also emphasises. Grosz criticises how Western philosophies of the body, including feminist de/constructionists, fall into the same dualist thinking that many of them aim at destabilising, as they do not address the specificity of classed, sexed, racialised and otherwise intersectionally formed bodies. Either, she argues, corporeality is addressed in ways that assumes a male body or, as in the case with feminist de/constructionism, the biological body is thought of as separate from its various sociocultural expressions. However, bodies, Grosz says, are anything but neutral, passive, bounded, or given entities. They dynamically transform into a multitude of different shapes that get determined both by their biological material characteristic and their specific sociocultural environments.

These new materialist challenges of dichotomous thinking of nature as separated from culture and from humans have made some feminist scholars argue that the environment constitutes an important category in intersectional gender studies (cf. Lykke 2010: 81; Plumwood 1993). I agree with Val Plumwood and Nina Lykke, who think that the absence of the environment in the body of intersectional studies tends to reinforce the human/nature and human/non-human dichotomies and put humans in a hierarchical position vis-à-vis non-human existences (ibid.). This not only ignores human exploitation of non-human animals and the environment, but also, which has been one of the motivations behind this thesis, misses out on the opportunity to develop understandings for the effects of naturecultural intra-actions that we currently are not aware of. Bowman’s material offers such a body-environment dimension, which also indirectly makes the environment part of my intersectional study.
**Between science and popular culture**

Popular science is a term with many meanings and interpreters. A dominant understanding of popular science is that it makes accessible the result from a not only complicated but also autonomous and neutral science (cf. the journal *Public Understanding of Science* n.d.). Accompanying this view are various concerns, often from scientists themselves, that much popular science mediation distort the “real” meaning of the science (Hilgartner 1990). Some argue that when media and other non-scientists try to interpret complex theories to facilitate distribution to a wider audience, this leads to misrepresentation and confusion (ibid.).

However, scholars within other academic fields, such as science studies as cultural studies, emphasise how this clear-cut boundary between science and popular science, as well as between scientists and public, is a construction. Rather, they say, science and popular culture are in an intimate relation characterised by mutual exchange (Lykke 2008: 11); an understanding which also informs this thesis.

In many ways Bowman is a public figure that in accordance with the dominating understanding of science as separated from popular culture presents herself as a trustworthy and educated mediator of this science to a wider audience. However, inspired by the science studies as cultural studies understanding of science, I throughout my analysis of Bowman’s popularised biomechanics conceive of her teaching as a co-constituent in an interwoven scientific and popular cultural landscape of circulating narratives, images and depictions that form our collective understanding of our world and ourselves.

**Turning to imaginaries**

In this thesis I explore how Katy Bowman, by means of her popularisation of a biomechanical science, stages, transforms, and builds credibility for a contemporary imaginary – a collective fantasy and discourse – on the natural and the healthy.

Studying imaginaries is a way to engage in the ideological function of images, themes and narratives that circulate in a culture. Masculinity and cultural studies scholar Graham Dawson suggests that imaginaries can be understood as time and location-specific webs of publically available fantasies and discursive formations that by employing both social and psychological aspects serve to unify the understanding of various phenomena (Dawson 1994: 48). Another way to describe imaginaries is as a culture’s way of mirroring itself by means of various fantasy images, which also makes them function as reference points for identity formations (Bryld and Lykke: 2000: 8). Imaginaries are with other words ideological
phenomena with significant influence over the way subjects and realities are collectively understood (Åsberg 2005: 30), which makes them highly political study objects.

In this thesis I thus examine the narratives, metaphors, images and models Bowman employs in her depiction of the natural and the healthy as both recognisers and producers of natural ways to be embodied subjects. In particularly I focus on how this identification and production of natural subject positions organise the understanding of classed, gendered and environed bodies.

**Posthumanist companions**

In a wider sense, my analysis of Bowman’s teaching takes many cues from the theoretical movement of posthumanisms or posthumanities (Braidotti 2013; Åsberg 2014). This is a movement that refuses to contrastingly separate nature from culture, semiotics from matter, and researcher from study objects (Åsberg, Hultman and Lee 2012: 38). Instead of, on beforehand, taking their characteristics and interrelation for granted, or ranking them in relation to each other, the posthumanities aspire to think of difference in new, non-hierarchical ways (ibid.). The posthumanities are a theoretical orientation that draws on several post-conventional academic arenas, most of which also inspire my analysis. I will briefly outline these fields below.

With its inter-disciplinary engagement in various forms of intertwining phenomena, feminist studies has played an important role for much of the posthumanist thoughts. Donna Haraway and Karen Barad, and many other feminist new materialist scholars are central figures of the posthumanities movement. As part of a questioning of the nature/culture dichotomy that I have described above, feminist new materialists have challenged the separation of gender and sex, arguing for how the sexed body is a mix of both material flesh and discursive practices (Lykke 2010: 106-122). In addition, the feminist de/constructionist and feminist new materialist intersectional interest in how different forms of power-differentials co-construct each other is also an important aspect of posthumanist theorisings.

Another influence comes from the field of cultural studies (CS), which by broadening the definition of culture from high culture to “meaning-making practices, i.e. something that is done, for example in the everyday life, rather than just ‘is’” has enabled an non-essentialist understanding of culture as active (Åsberg 2005: 89, my translation). Cultural studies as a

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7 I agree with this understanding of gender and sex as intertwined. Throughout the thesis, I use the term gender as shorthand for gender/sex, with exception for when I explicitly want to address “sociocultural or bodily material aspects” (Lykke 2010: 13).
field also incorporates a political commitment to marginalised groups and subjectivities (Lykke 2008: 8).

A third field of importance for the posthumanities is science and technology studies (STS), which not only challenges technological determinism and “natural science’s hegemonic claim to be able to set the standards for all ways of constructing scientific explanations” (2008: 9). In recent years, along with the recent ontological turn to new materialism, this field also considers technoscience as a construction by intra-acting human and non-human actors (2008: 9-10).

Several contributors to the posthumanities also draw on science studies as cultural studies (SLS); the hybrid of cultural studies and science and technology studies (2008: 7) that further undermines the positivist discourse of natural science, by emphasising the contagious relation between technoscience and various cultural expressions, such as literature, visual arts, fiction, and metaphors (2008: 11). Simultaneously, with its focus on “such signifying practices as popular science, media representations of science and technology, science fiction, the lived experience of technobodies, the technological practices of everyday life, and so on” this field helps, just like cultural studies, to deconstruct elite understandings of culture (ibid.).

In addition, cultural studies, science and technology studies, and science studies as cultural studies have their feminist versions that also provide significant input to posthumanist theorisings. While feminist cultural studies, feminist science studies, and feminist cultural studies of technoscience have many overlaps with their non-feminist siblings, they have partly different genealogical roots and focus (2008: 8-10). In this study I am foremost inspired by these feminist versions, as they while incorporating what I have discussed as part of the description of CS, STS, and SLS above contribute with a broadened, yet less universalising, outlook in that they emphasise the importance of gender perspective.

To sum up, this thesis is inspired by feminist theorisings of naturecultures and intersectionality; takes as a starting point a widened understanding of culture; and understands science as a co-construction of social and technical actors that are in a contagious relation with popular science. I argue that Bowman’s teaching constitutes a meaning-making process that draws resources from and changes both the support for and the production of a biomechanical science. Furthermore, exploring notions of the natural with a focus on the categories of gender and class is a way to commit myself to some of the “inappropriated others” (Minh-ha 1986-87; Haraway 1992) emerging through Bowman’s popular science –

8 Science studies as cultural studies is sometimes also referred to as science and literature studies (SLS).
i.e. subjects who are excluded, dominated or stigmatised through networks of various discourses.

Finally, I will address the important contributions brought to the posthumanities by the fields of human/animal studies and environmental studies, which explore the complex and dynamic relation between humans and non-human actors, such as animals and chemical substances. These are theorisings that are located somewhat outside the scope of my analysis of Bowman’s work. However, this thesis can be linked to environmental studies, as an important part of Bowman’s teaching concerns our bodies’ relation to an everyday environment – a relation that I argue is undertheorised within this field.

**Material, methods and ethics**

In an ambition to explore many of the “aesthetic techniques and communicative aspects” (Åsberg 2005: 46, my translation) that Bowman employs in her teaching on the natural, I draw on a wide range of material. My main material has been Bowman’s book *Move Your DNA* (Bowman 2014a), in which she introduces the foundation and gives an overall picture of her philosophy. This book has been a useful source for getting a red thread in the comprehensive and scattered teaching that I have taken part of via Bowman’s different platforms over many months preceding this research. A similar function has *Whole Body Barefoot* (Bowman 2015a) served. While being foremost about feet and shoes, this book has constituted an important material given Bowman’s emphasis on the feet’s neglected and essential role for bodily health. In addition, I include quotes from Bowman’s blog *Katy Says* (Bowman 2007-2015), from hers and Dani Hemmat’s podcast with the same name (Bowman and Hemmat 2014-2015), and from her *Alignment Snacks* videos (Bowman n.d.-a), in which she demonstrates her Restorative Exercises. These are materials that allow me to capture even more of the casual and informal tone that characterise much of Bowman’s teaching, made as they are much more “on the go” than her books and some of her more formally recorded material. For the purpose of showing the extensive use of some metaphors or due to specifically dense or meaningful phrasing, I also, in parts of the thesis, draw on Bowman’s website information; her in-depth *Whole Body Alignment* (Bowman 2011a) course; her DVD-series *Aligned and Well* (Bowman 2009) with Restorative Exercises and biomechanical explanations; and online bloggers’ and health fora’s interviews with Bowman.
While this foremost is a historiographical study, I have, as already mentioned, in addition to the visual, audible and textual material let my own embodied experience of following Bowman’s program for almost two years inform my analysis, in the hope of getting at some of the corporeal effects that intra-act with the discourses in her work. As part of this experience, I have also actively participated in an online forum for students of Bowman’s comprehensive *Whole Body Alignment* (Bowman 2011a) course. Although this community has offered me a good insight into the culture that Bowman is part of and co-creates, I have, however, not included any of its communication in my analysis. Not only would it be difficult to get consent for such research from the large number of members. I was also afraid that such an approach would distort much of the trust and openness that permeates this forum. Yet, in order to connect my corporeal experience with a wider context, I have in the end of the thesis referred to a few publically available stories online by people who have made bodily transformations that are similar to mine.

In my analysis I have consequently used a mixture of methods. The feminist, new materialist and cultural studies concepts that I presented as part of the account on the theoretical framework – such as intersectionality, naturecultures, intra-action, and imaginary – have also constituted significant tools in my analysis. Rather than repeat my account on them, I will here present three other approaches that have inspired me in the research process: the “fan stance”, “rhetorics of the self”, and “writing as a method of inquiry”.

I have found great inspiration in feminist cultural studies scholar Constance Penley’s “fan stance” approach, which she presents in the introduction to her book on the mutual and flirtatious relation between Star Trek and NASA (Penley 1997: 3). Drawing parallels to the “slash” culture around Star Trek, where Star Trek fans rewrite the original fiction narrative in ways that incorporate sexual fantasies and different social desires, Penley emphasises how knowing a culture as a fan enables a particular, more creative, kind of critique. The fan is not, she argues, out to simply dismiss the whole, but engages in a sort of “tough-love” approach, that improves the object (ibid.). Penley’s experience of presenting her research for representatives from NASA also illustrates how criticising as a fan tends to result in better ability to accomplish change, as it does not provoke the usual knee-jerk reactions. They were, she writes, able to listen to her criticisms as it could be situated “within an overall appreciation of NASA” (1997: 4).

This tough-love aspect that the fan position enables speaks to me, as I during the long period of time that I have followed Bowman’s teaching have struggled with how to justify to my self and to others my indirect support of that in her philosophy and teaching that I found
troublesome. According to my partner, I have fallen for typical cult methods – the targeting of people who have lost faith in a mainstream system and then drawing them even further into isolation, away from the rest of society. I understand that it must be tiresome for him with my frequent suggestions on getting rid of even more of our furniture, and that I spend evening hours trying to find flat and flexible shoes to our children over the internet and on catching up on work I did not finish during the day due to taking so many Restorative Exercise breaks on my regular working hours. Finding a tool that actually helped me release the pain I had been struggling with for years, also, indeed, resembled a religious experience; like a miracle come true even. Yet – or perhaps just because of this experience – I am not willing to agree with my partner’s verdict on me being led down the primrose path. Miracles certainly have the power to trigger subjection. In the excitement of being given something that finally helps solve pieces of a long-term and physically felt problem, it is tempting to buy whole packages of the same sales person. Nevertheless, I like to believe that having had an ever-present and extensively affecting problem also decreases the risk of dismissing useful tools and concepts just because they come in a box filled with unstylish accessories. I am not able to reject a program that in a physically tangible way has things to offer. But, this has also increased my motivation to interrogate Bowman’s teaching from my specific fan position. In addition to enabling me a better understanding of her multifaceted role in the transforming contemporary landscape of imaginaries on the natural, my fan stance is an attempt at formulating transformative feedback of a teaching that I innermost hold very dear.

Ethically it is important for me to make visible this fan position. The hegemonic writing-ideal within the academia, especially within the natural sciences that I have a background in and that Bowman refers to, is the striving for neutrality and objectivity, which is associated with a third person perspective where as little as possible of the writers subjectivity is part of the text. The researcher is regarded exchangeable as long as sticking to the correct methodological procedure, and thus s/he should not be visible in the reporting. However, this belief in the ability to produce person-independent and universal knowledge is at odds with postmodernist and feminist philosophers of science’s emphasis on the time- and location-specific character of all experiences. The knower is always in the middle of what s/he observes, they argue – or, as Haraway says, in “the belly of the monster” (Haraway 1991: 188). This implies that it is impossible to take on the role of an outside observer. Haraway calls the writing in a seemingly omnipresent disembodied and context-free voice a “god-trick”; an illusion. Along with other postmodernists, she regards science as a “story-telling practice” (Haraway 1989: 4). However, rather than, as some other postmodernist have,
turning to relativism and claiming that all stories are of equal value, which would imply that much ethical consideration would be superfluous, Haraway suggests the principle of “situated knowledges” (Lykke 2010: 5). This principle holds that by consciously and openly display the context from which one approaches the problem, a *partial* objectivity is obtainable. My inclusion of and drawing upon my own embodied experience of following Bowman’s teaching is partly an attempt of enabling such a specific non-universal objectivity.

In accordance with the principle of situated knowledges, I here also want to address some of the limitations of my outlook and partly self-narrating approach. My accounts – both the personal stories and my more analytical discussions – would not have been the same had I not noticed any relief from Bowman’s exercises or suggested life-style changes. Likewise, my focus would perhaps have shifted from the specific ways notions of the natural and the healthy intersect with gender had I not been a woman, and/or mother. In many ways I also write from a privileged position. As Jackie Stacey lifts forward, academic scholars have the luxury to write any narrative they want and expect people to read it and even give feedback on it (Stacey 1997: 21). In this sense I do not have to make myself as much worries on whether or not it is worth the effort of sharing my story. In addition, I have the time and economical situation that allow me to involve myself in Bowman’s program to start with. I thus, offer a perspective that is more commonly made heard. While I lift forward some online comments by people with other socio-economic circumstances in my analysis, I can thus not tell any such particular story from my own life. I might also have missed important aspects in my analysis due to this blind spot.

Furthermore, the use of my own memories has pitfalls in itself. Nobody has full access to their former lived lives through this type of recalling of events. In addition, the sharing of memories and experiences always include a selection – intentional or unconscious – either for practical reasons, or out of respect for other’s or one’s own integrity. In this sense, telling a story is always also about “rob[bing] it of complexity” (Kraus 2003: 283).

Yet, while the experiences I write about by no means are universal, or reflections on a fixed and accessible past, I argue that this thesis is of concern for many more people than me. Like Jackie Stacey, I am also interested in the connections between the personal, political and theoretical (Stacey 1997: 24). I would like to consider my personal stories in this thesis as “rhetorics of the self” (ibid.). With this phrase Stacey emphasises how she seeks to tell stories that are simultaneously motivated, strategic and textual. Including a series of such textual “rhetorics of the self”, is, she writes, a way to “connect competing forms of knowledge, and […] interrogate the very formations of these different knowledges” (ibid.).
For me, the destabilisation of the dominant discrepancy between personal and intellectual writing that Stacey points out that textual “rhetorics of the self” can enable (ibid.) is also connected to another methodological writing approach. This thesis has taken many forms and orientations before it finalised into one. Looking at the result, it is, however, easy to get the impression that the research has been a straight line of thoughts, as many of the myriads of thinking processes and attempts are sorted out. Yet, as Laurel Richardson (2000) and many in her aftermath (cf. Lykke 2010: 163; Koobak 2013: 60) emphasise, the writing itself enables many of the paths a research takes. Taking as an epistemological starting point the poststructuralist understanding of language as producer of meaning, Richardson emphasises how the very organisation and choice of words and style determine what we can know. Writing should thus, she argues, rather than as a reflection of a finished research result, be seen as an important part of the research process; as a method of inquiry (Richardson 2000).

To round off, I would like to emphasise how I consider “writing, method, methodology, epistemology, ethics, and politics [to all be] inextricably linked” (Koobak 2013: 58) by describing a final overarching concept that connects the many theories, tools and considerations that I have deployed throughout the research process; I like to see my mixed-method approach as diffractive. Diffraction is a physical phenomenon that among others refers to how the light, when passing through an array of narrow slits, rather than bounces or reflects back as in the interaction with a mirror, bends and forms various interference-patterns on a screen bind it. Donna Haraway (1997: 268-274; 2000: 101-108) and Karen Barad (2007: 71-94) promote diffraction as a methodological concept that is more adequate for accomplishing change than the common metaphor of optical reflection. Because, where a reflection refers to the mirroring of a stable object, diffraction disturbs the order. The deflection of beams makes the foreground and background change places and gives rise to a multiple of new patterns (Lykke 2010: 155). Diffraction thus acknowledges the creative opportunities that come with the socio-cultural-material world’s performativity. In my analysis of Bowman’s teaching I have aimed at taking on such an affirmative approach and responsibility in the hope of enabling a limited set of alternative realities.
Outline of the thesis

And now that this inquiry-process finally has taken its definite form, I will give a short overview of its structure before I move on to present the analysis of Bowman’s teaching. The thesis is divided into four chapters: an introduction, followed by two analysis chapters and a conclusion chapter. The analysis chapters present major themes and explore a selection of the rhetorical devices in Bowman’s teaching. This helps me approach her material with regards to two aspects: firstly, Bowman’s imagining of, and bodily practices around, the natural and the healthy; and, secondly – with a focus on the formative categories of class and gender – what subject positions and bodily effects these fantasies and bodily practices enable and prevent. In the opening of each analysis chapter I have included a self-narrative from my experience of following Bowman’s life-style program. These serve to give a more direct and embodied depiction of what the chapters will address.

In Chapter 1, “Introduction”, I have situated Bowman’s teaching in relation to my own chronic pain history and a transforming landscape of conceptualisations of the natural. In this chapter I have also presented the aim and research questions; given an overview of Bowman’s teaching and my own relation to her work; described the theoretical framework; and, described my choice of material and methods, and discussed my ethical concerns.

Chapter 2, “Paleo Fictions”, demonstrates how Bowman simultaneously conceptualises us as naturecultural beings and reinforces dichotomous understandings of nature as opposed to a contemporary culture. I situate this thinking within a wider Palaeolithic imaginary and describe how Bowman’s pervasive teaching on our bodies’ intimate and dependent relation to our everyday environment of physical loads helps reconfigure and build support for a contemporary metanarrative on our bodily health as determined by our evolutionary past.

Chapter 3, “Natural Responsibilities”, aims at exploring the implications of Bowman’s conceptualisation of nature as both intertwined with and separable from culture. I discuss Bowman’s emphasis on our bodies’ viscosity and her techniques of self-control, and contextualise her teaching within a wider individualised health discourse. This enables me to illuminate some of the classed, gendered, and highly corporeal effects of Bowman’s teaching.

In “Conclusion”, Chapter 4, I gather the reasonings I have held throughout the thesis and discuss what they indicate in terms of a Western collective understanding of our bodily relation to our environment. In this chapter I also outline some suggestions on further research.
The book cover of *Move Your DNA* (Bowman 2014a).
Entrance: once upon a time

The book cover of *Move Your DNA* (Bowman 2014a) depicts a woman kneeling by a fireplace; reaching her hands out, as to keep warm from the cold night. A silhouette of dry grass or a bush in the slope enhances the outdoor scenery, and a temporary shieling behind the woman indicates that she is staying over night. She is dressed in a contemporary red, sporty top and has her hair comfortably tied up on the back of her head. Above the picture, in large fire-coloured capitals is the book title – *Move Your DNA*, promising us influence over our bodily pre-conditions. The subtitle – *Restore Your Health Through Natural Movement* – clarifies this assurance; we will be able to go back in time to a previous healthier stage, which perhaps not even is a stage we personally have experienced, but the health stage of a more naturally living human ancestor. We are, it hints, distorted – affected in the wrong direction. But now we seem to have been given the answer on how to reverse this unfortunate development. The title is printed on a background of a discrete molecule-like pattern; a scientific map or sketch of small biological chains. Underneath the picture with the woman is another illustration of dark shiny cores surrounded by yellow-white-transparent ellipses, resembling the rings around planets or fluids in reactor glasses. We can anticipate that we are to take part of a grandiose and detailed science on our bodies. The truth about our nature is at our hands.

I have sometimes found myself putting away my copy of *Move your DNA* when people come visit us. I do appreciate the book a lot for many reasons. In addition to its accessible style and many hands-on tips and exercises to reduce pain, Bowman in this book very interestingly elaborates on how our everyday load environments influence us on a cellular level. However, I still feel uncomfortable with the book lying there with its attention-seeking orange title and message on salvation through rejection of contemporary culture; afraid that seeing the book will make them conceive of me as naïve and as buying into unsupported fantasies about a static human nature. Yet, after getting rid of our sofa and bed the conversation inevitably always comes up when we have visitors. And it always moves from my reasons to change my movement lifestyle – that varying my positions has made me feel much better – to Bowman’s explanations on it having to do with our bodily health as determined by our ancient ancestors movement patterns. Most often it ends in a discussion on how true her conviction is. We talk about what proofs there are, scientifically speaking. What evidence exist that it really is healthier to live like they did in the Palaeolithic age? Did they not just die younger so that they did not have time to develop our cancers? Were they not in
just as much pain or more than most of us are today? Sometimes people are critical, sometimes interested, but either or we talk about the existence or absence of hard, positivist, scientific facts.

That many of us, in order to believe in something today, want it lined in a convincing and serious science frame is something Bowman is well aware of. In this chapter, I explore how she draws on a hot field of science, that also has many interesting overlaps with feminist understanding of the body as environed, to build support and influence for a Palaeolithic imaginary that puts contemporary culture in a dichotomous relation to a natural past. I argue that Bowman by means of her pervasiveness – her detailed teaching on how the human body, down on cellular level, is being crucially influenced by its biomechanical environment – help bolster a grand narrative on us as evolutionary beings.

**The Palaeolithic imaginary**

I’ve been teaching people about shoes, feet, and gait for over a decade, and I’ve found that understanding the basic geometry of footwear helps people understand the mechanical changes to the body that shoes and walking in shoes over a lifetime can bring about, and why and how the body adapts to different shoe input. (Bowman 2015a: 13)

In one way, Bowman’s worldview fits Donna Haraway’s (2003) conceptualisation of us as *naturecultural* beings. With this term Haraway emphasises that nature and culture cannot be separated; that matter, discourse, language and semiotics are all intrinsically intertwined. It is thus impossible to study a “pure” nature underneath our culture (Haraway 1989). Similarly, in the quote above, Bowman alerts us to how the shoes we wear over our lifetime affect the physical function and shape of our bodies. The characteristics of these shoes are in turn determined by a variety of both material and sociocultural factors, such as the vulnerable position of these parts of our bodies, fashion, what is deemed feminine or masculine, etc. (Bowman 2015a: 5, 11, 19). The altering of the body through certain footwear also determines what shoes are requested to obtain comfort (2015a: 21). And, while shoes are important, they are just an example of a much larger picture that Bowman draws us. Everything we wear, in fact everything we do, matters: “[Your body] is constantly responding and shifting to a continuous stream of input provided by your external and internal environments, even if that input consists only of sitting still, for hours on end” (Bowman 2014a: 36-37). Our bodies, Bowman teaches us, are literally shaped by our environments –
physical load environments that are inextricably intertwined with our cultural habits and beliefs.

This idea of the body as intertwined with and formed by its environment indeed links well with feminist thoughts. Feminist theorists have long criticised modernism’s cherishing of the Cartesian notion of bodies not only as being in independent of the mind, but also from other bodies and the surrounding world (Shildrick 2015: 14-15). For example, while phenomenologically inspired feminists foremost stress how the lived experience of being gendered and otherwise intersectionally formed subjects is the result of an “irreducible coming together of both mind and body”, an important foundation of their philosophy is also how bodies are interconnected and under influence of their environment (2015: 14). In recent decades the reawaken interest in the material within the social sciences and the humanities has more explicitly involved feminist destabilisation of modernist notions of bounded bodies. Within various fields – such as critical disability studies, environmental humanities, science and technology studies, and general feminist studies – feminist philosophers have lifted forward how technology, toxic chemicals, geopolitics, economy and bodies are interwoven in dynamically transforming relationships that make the idea of an autonomous individuality impossible (cf. Shildrick 2015; Alaimo 2010; Haraway 1989, 2003; Grosz 1994).

However, while bringing attention to the intertwining of nature and culture for post-structural feminist scholars is part of a deconstruction of a Western tradition of dichotomous thinking, Bowman taps into and reconfigures a Palaeolithic imaginary that contrasts a contemporary time with a more authentic ancient past. 9 The Palaeolithic imaginary is made up by certain images and narratives on a fantasised primitive and wild Palaeolithic man inside us all; a fiction circulating in the popular and science cultures that enables naturalisation of different behaviours (Åsberg 2005: 237). In these accounts and pictures, biology is called upon in ways that depicts the human origin as a-historically natural, as something given and essentially unchangeable. Furthermore, this ancient figure lends itself well to projections of different ideas that are associated with a natural wilderness (ibid.). In the health context Bowman acts within, such projections have in recent years been made by a diverse group of evolutionary medical representatives as well as popular media channels that promote a fantasy

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9 Poststructuralism is a strand of postmodernism that holds that language constructs meaning rather than reflects a stable reality (Lykke 2010: 97; Shildrick 1994: 72). Inspired by French philosopher Jacques Derrida, many poststructuralists have aimed at destabilising seemingly given truths by illuminating the ways in which West throughout history has produced meaning through hierarchical binary oppositions (Shildrick 1994: 80).
of humans as not adapted to the wide-ranging and quick changes in lifestyle that have occurred the recent ten thousands of years.

This contemporary Palaeolithic health tale has various focuses. Most commonly known is perhaps the regiments on what (not) to eat; voices are raised to warn and motivate us to align our eating habits with what is believed to have been the diet during the initial and larger part of the human evolution (cf. Lindeberg n.d., Hultén n.d.). Giving up sugar, cereals, milk and other processed foods in favour for meat, fish, eggs and vegetable is claimed to prevent a whole range of health conditions, such as bowel problems, autoimmune diseases and malnutrition (cf. Hultén n.d.). In addition to the “Palaeolithic diet”, various movement programs and exercise regimens emphasising a natural and ancient way of moving are also gaining momentum in the new millennium. For instance, the barefoot running community front-figure Christopher McDougall (2009) argues both for long-distance running and against large-industry shoe businesses by hypothesising about the evolutionary benefits of barefoot endurance running. While seemingly different what practice is concern, the multi-activity sport of CrossFit is likewise advertised with claims on being based on our ancient ancestors natural movement patterns, which here in addition to running are held to be sitting, climbing, jumping, throwing, etc. (cf. CrossFit Nordic 2014). A third example is Erwan Le Corre’s MovNat, which sells “natural movement” with an emphasis on our inherited need for variability, efficiency and a “restful state of mind” (MovNat 2009-2013a).

Clearly, there is both a competition on the interpretative prerogative of and a joining of hands in promoting the natural as Origin, and, just like the rest, Bowman joins the missionary of the unrefined with a partly overlapping, partly contrasting message. I will present Bowman’s teaching in more detail in the following parts of this thesis. Yet, before I proceed, I want to mention some general similarities and differences between her’s and some other prominent figures’ and communities’ messages on the natural. Like McDougall, the CrossFit community and Le Corre, Bowman focuses on the importance of movement rather than diet. “… [S]itting on your couch or chairs for hours every day does just as much if not more damage than sugar for every meal” (Bowman in Saint-Paul 2014). Yet, Bowman argues, what this movement should look like is not well understood by most people. For example, while agreeing upon that bulky and elevated sport shoes impose significant health risks, Bowman does not, like McDougall, promote long-distance running. This activity can, she argues, actually do more harm than good when it comes to cardio-vascular health. And, appreciative

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10 Inspired by Donna Haraway (1989), I have capitalised Origin. For me this is an attempt to emphasise both the fantasy-character and the worshiped status of the imagined ancient past.
Bowman says, a mistake, as movement refers to so much more and to only do sports means that essential parts are left out. “[N]atural movement is not just about muscles and exercise. (And just to be confusing, sometimes natural movement isn’t even about moving.)” (Bowman 2014a: 22). According to Bowman, since the environment shapes our bodies constantly, everything we do becomes important – gets to count as movement. That movement is more than exercise is a view Bowman shares with Le Corre (MovNat 2009-2013b). Nevertheless, where Le Corre stresses intuition Bowman foremost pushes rationality, indicated by the intro to her podcast: “Understand the mechanical causes of modern ailments, learn how to fix them, and restore yourself to a more functional state of natural human movement” (Bowman and Hemmat 2014-2015).

To sum up, Bowman simultaneously understands nature as intertwined with and as in dichotomous relation to contemporary culture. One the one hand, Bowman describes how physical load environments that are intrinsically connected to our sociocultural world shape our bodies; a conceptualisation that fits well with feminist understandings of bodies as environed. Yet, Bowman nevertheless contributes to problematic Western dualisms of past and present, nature and culture. Because, she taps into and reconfigures a Palaeolithic imaginary that contrasts a natural past to a present unnatural culture. Like several other contributors to this imaginary, Bowman emphasises movement as most important for bodily health. While her teaching both distinguishes itself from and has similarities with these other contributors’ message in terms of the definition of natural movement, her biomechanical science-alluding take and rationale is uniquely her own.

Contradictory as it might sound, as I will argue for below, Bowman’s conceptualisation of us as entwined with our environment effectively helps build credibility to a large-scale story on nature as Origin.

### Building support for a contemporary metanarrative

By means of for a Western contemporary time cogent ingredients, Katy Bowman helps build credibility and support for a diverse epic tale of humans as evolutionary naturecultural beings.

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11 The correspondence of Bowman’s and Le Corre’s beliefs is further indicated by Le Corre writing the foreword to Whole Body Barefoot (Bowman 2015a) and Bowman producing a podcast episode on the MovNat retreat she visited (Bowman and Hemmat 2015a).
Indeed, the stories on Palaeolithic ways of living amount today – with above-mentioned paleo diets, paleo popular history, and paleo-patterns of bodily movement – to a larger story-telling practice of our imagined human past.\textsuperscript{12} Famous for his declaration of the death of the metanarratives, indicative of the postmodern condition, French philosopher Jean-François Lyotard (1984) suggested that large-scale stories had ceased to hold their power over people.\textsuperscript{13} Universal accounts were mistrusted, Lyotard claimed, and instead people opted for a diverse flora of multiple co-existing micro-narratives that engaged in the specifics of different phenomena. I take my cues from other contemporary scholars of science and culture in questioning if the death of metanarratives perhaps is an over-statement; that grand narratives indeed continue to play important parts in contemporary culture. Jackie Stacey argues that while metanarratives about liberation and pursuit of knowledge have ceased to build support for excluding biomedical practitioners’ power over their patients, such grand narratives have been dislocated to new places (Stacey 1997: 201-237). Similarly, Mette Bryld and Nina Lykke write how these kinds of metanarratives, or collective fantasies, fill a significant role in identity formation (Bryld & Lykke 2000). I argue that Bowman takes active part in forming and increasing the influence of such a large-scale fantasy. By presenting to us profound details, Katy Bowman helps us understand, stage, and practice ourselves as crucially determined by our Origin.

**Persuasive pervasiveness**

Where other health programs and experts referring to nature as Origin talks rather superfluously about the effects on general health that their methods have (cf. CrossFit Nordic 2014; MovNat 2009-2013a) Bowman takes on the mission to explicitly describe how different mechanical input participate in changing us on a cellular level. Because, according to Bowman (2014a), physical forces act upon us in specific ways depending on how we sit, stand, lie, or move our bodies in space, and the loads they create crucially influence our cells, and consequently how healthy we are. A great part of our most common diseases should, she says, be understood as intimately connected to inadequate movement patterns and unfavourable passive relationships with our biomechanical environment. Bowman underlines

\textsuperscript{12} While I throughout this thesis use the British spelling of the term ”Palaeolithic”, I have used the American spelling of its shorthand version, ”paleo”. Most of the contributors to the health movement around the Palaeolithic imaginary spell “paleo” this way. More importantly, it is how Katy Bowman writes it.

\textsuperscript{13} Metanarratives, or grand narratives, are comprehensive and permeating stories that function as ideologies. According to Lyotard (1984) the main two metanarratives of modernity are 1) that history progresses in ways that make societies more enlightened and liberated to live in, and 2) that science can give us knowledge about everything.
that physical loads influence our inner building blocks; that they affect our cells’ behaviour. Thus, to Bowman, it is essential that we understand and take this particular environmental factor more seriously.

Illustration of the View-Master from *Move Your DNA* (Bowman 2014a: 29).

According to Bowman, an important part in accomplishing a more adequate attitude with regards to environmental influences is to understand that genes are not the destiny-predictors that many have been led to believe. “Scientists have observed that a person simply having a particular gene doesn’t automatically create a particular outcome. This means, for example, that you and your neighbour could both have a breast cancer gene, but only one (or neither) of you gets cancer” (Bowman 2014a: 28). Bowman compares our “genetic makeup” with the limited set of images on a View-Master reel (ibid.).14 It is how one specific picture on this reel gets to be displayed in the View-Master window that interests Bowman.

After briefly mentioning the genome – which Bowman explains as “your genes, gene modifiers, and the ‘junk’ in between” – we are in *Move your DNA* introduced to the mechanome (2014a: 29). The mechanome, Bowman writes, is an umbrella term for “all the forces and machinery” that co-operate in letting the View-Master action happen, i.e. both the external forces involved in the toggling on the lever and the internal apparatus that transmits

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14 The View-Master is a binocular-like device in which 3D-images can be viewed. By toggling a lever the inserted reel with limited number of pictures can be rotated so that a specific image can be selected.
these forces into movement of the inserted disk (ibid.). “The machinery, the process of creating stimulation, the loads that are perceived by your cells’ mechanosensors, and the response triggered by the cell deformations – are collectively called the mechanome. A mechanome is the interplay between forces and biology” (ibid.).

Bowman depicts the human cell as a sort of sustainable masculine assembly. There is no mentioning of any lubricants necessary to sustain the function of this clockwork-like organism. The genetic output might be dissatisfying due to inadequate toggling on the View-Master lever, but the machinery itself is not faulty, perfected as it is throughout the human timeline. Bowman indeed has a preference for comparing the human body with technical systems. In the introduction to her Aligned and Well DVD-series with Restorative Exercises we are told: “Just like the wheel alignment of your car, the alignment of the human body instantly impacts its performance. So if you’ve never been told how to load your body properly … chances are that you are sitting there with a disease that you have created through misuse of your machine” (Bowman 2009). The machine metaphor also appears in Whole Body Barefoot, in which Bowman explains how heels on footwear block the ankles from moving through the ranges of motion they would have if being shoeless: “But if you’re interested in having optimally functioning feet, and restoring the motions that are necessary for muscle development, circulation, and nerve health, your list of components must include the range of motion of the ankle as a ‘part’ of the machine. … Would you accept wheels on your car that only rotated 355°?” (Bowman 2015a: 21). There is no fault in car design, Bowman seems to think, but in how we drive.

While this modernist dividing of the body into machine-like parts often brings with it an emphasis on separability and interchangeability in ways that ignore many of the body’s complex and boundary-transgressing processes (Einstein and Shildrick 2009), this is, however, only partly the case with Bowman’s work. Her machine metaphor indeed puts weight on predictability and uncomplicatedness: “The solution to most health situations is often very simple. I’ve put together a bit of an owner’s manual with trouble shooting tips for each area of the body” (Bowman 2009). Yet, Bowman’s teaching simultaneously underlines the bodily system’s intricacy in ways that corresponds with much feminist theorising of our bodies’ and organs’ unbounded character (cf. Einstein and Shildrick 2009; Shildrick 2015). Starting the chapter where Bowman explains the mechanome is the following Richard Feynman quote: “Nature isn’t classical, dammit, and if you want to make a simulation of nature, you’d better make it quantum mechanical, and by golly it’s a wonderful problem,
because it doesn’t look so easy” (Bowman 2014a: 27). Bowman might know how to write the bodily machine’s owner manual, but it is a complex machine nevertheless.

This complexity becomes clear when Bowman explains the physical loading of the bodily parts. While we might think of our bodies as a collection of different organs, these are, Bowman tells us, made up by cells that are connected through a cellular network that organises and regulates the cellular action. “When you move what you probably think of as your body – arms, legs, torso, head – you are not only rearranging the larger structures of your limbs but also your small, cellular structures” (2014a: 10). This is, Bowman argues, important to know, as each of these cells becomes loaded differently. She underlines how, while there for example is a constant gravitational force on Earth, the loads the gravitation creates in the different cells of the body depend on how these cells are positioned in relation to the gravitational force (2014a: 10). And loading the cells are more than gravity. Everything involving a push or pull motion is to count as forces, which, Bowman tells us, means that:

\[ \text{E}xternal \text{ pressures (like the interaction between bone, muscle, and a chair, frictions (like a new pair of shoes against your foot skin), and tractioning forces (remember in the eighties movies, those old-school pulley-on-cast devices used in hospitals after someone broke their leg skiing?) all create cellular deformations within our body, as does movement itself. The lengthening and shortening of larger tissues like muscle creates pushes and pulls on the small-scale stuff. (Bowman 2014a: 11) } \]

According to Bowman, these deformation-causing pushes and pulls on the cells also result in explicit bodily expressions, like pressure wounds from unvaried lying or sitting, blisters from new shoes, and muscle atrophy from casts. But the effects of mechanical inputs are much wider than that, she informs us. Mechanotransduction, which Bowman defines as “the conversion of movement ‘input’ to biochemical processes” (Bowman 2014a: 10), is, she declares, “finally, being researched as the underlying mechanism of many diseases” (2014a: 11). Bowman, thus, in an explicit manner conceptualises our bodies as crucially connected with, influenced by, and dependent of a world that is more than human – indeed a very feminist thought.

To link her implicit understanding of us as naturecultural beings to the past-present and nature-culture dichotomies, Bowman deploys two core types of metaphors. Firstly, she compares the specificity of the loading of cells with the nutrients in food. Just like the nutrients in a snicker bar is different from those in a kale salad of the same amount of total calories, the load profile – how our cells experience a load depending on how they are
positioned in relation to the force giving rise to it – of different kinds of positions, movements, and from various external items like clothes or furniture, is unique. Riding a bike, she writes, is not equal to walking, not even to riding a bike in a different position (2014a: 17). And, while many of us are not doing well in terms of eating balanced enough, we are also missing essential movement characteristics: “I propose that movement, like food, is not optional; that you have been receiving signals of movement hunger in response to a movement diet that is very low in terms of quantity and poor in terms of quality – meaning that you aren’t getting the full spectrum of movement nutrition necessary for human function” (2014a: 8). According to Bowman, just like junk food prevents starvation but contributes to various ailments, exercise is only helping us temporarily. “Without a better prescription for what to eat/how to move, the moves we consume to meet our recommended daily allowance (RDA) become mostly junk. And, without considering how each movement results in a unique load profile and a specific adaptation, we will miss how exercise in a modern context can actually create disease, despite our very best intentions” (Bowman 2014a: 53, italics in original).

The nutrition and junk food metaphors are well chosen for her target group of health-interested individuals. In the beginning of Move Your DNA Bowman also specifically addresses her reader’s knowledge: “But, I’ll bet that many of you reading this book have probably done quite a bit to educate yourself on a nutrition profile even more detailed than I’ve listed above. Take ‘an appropriate ratio’ of fats, for example: What kinds of fats are necessary? Saturated? Monounsaturated? Trans fats? WHAT ABOUT OMEGA 3S? WHY AREN’T OMEGA 3S ON THE LIST?” (2014a: 8) These metaphors thus both acknowledge the readers educated status and gives an easy to understand image that emphasises the complexity and importance of loads. Bowman’s message that movement is not something only to consider a few times a week, but what we need to incorporate more continuously also comes through as logical, as most of us have a sense of the difference of consuming a large meal versus many smaller ones of the same nutrition quality. Likewise, that junk food is not good in the long run is so non-controversial that expanding this concept to movement and passive loading makes it almost unnecessary for her to explicitly say that contemporary artificial devices and technology are to be met with scepticism.
Illustration of an orca with a collapsed fin from *Move your DNA* (Bowman 2014a: 22).

Connected to the food similes is another core metaphor that serves to underscore the scale of the problem with our contemporary life-style: diseases of captivity. With this term Bowman refers to how the dorsal fins of orcas collapse when the orcas are kept in captivity. Marine biologists and sea-mammal veterinarians have, she tells us, pointed out the strong biomechanical environment connection to this syndrome. In the shallow tanks, the orcas are according to Bowman swimming exclusively in counter-clockwise circles, are deprived on the higher pressure that they would have experienced in the depth of an ocean, and consume food with less water content. Captivated orcas also spend more time at the surface, we learn, which increases the gravitational load on their fins. Luckily, Bowman argues, there are free orcas to compare the captivated ones with. “Let’s say that, in the future, all whales exist only in captivity, and captive whales were the only ones we can observe, gather data about, and research. Over time, the high frequency of flopped-over fins will appear to be the norm” (2014a: 24).

This, normalisation of an unhealthy environment is exactly what has happened to humans, Bowman continues.

Trade floppy fins for bum knees, collapsed arches, eroded hips, tight hamstrings, leaky pelvic floors, collapsed ankles – you name it – and consider our load profile. Walking on treadmill an hour a day creates an entirely different load profile than walking over the ground for an hour. Wearing shoes to walk that hour creates a different load profile than walking without. Spending eight ours before and after that hour-long walk sitting down creates a different outcome than dividing an hour’s walk throughout the day. (Bowman 2014a: 25)
The diseases of captivity metaphor is thus a rather outspoken attempt of Bowman to destabilise the link between normal and natural. While the deconstruction of this link has been an important part also of feminism, Bowman’s destabilisation serves to support the construction of a new building with just as a problematic foundation. Because, not only are Bowman telling us to discontinue the habits we have earlier been taught; that we should not simply copy what the majority may be doing around us; or that much research on health is invalid, as many of these studies compare individuals within the same, from an unhealthy environment, sick population. Bowman also aims at showing us a better alternative. And this is an alternative that in addition to opposing the idea of widespread diseases as foremost genetic, relates these diseases to the specific technology and conveniences of a contemporary culture:

The loads we experience in today’s world differ hugely from the loads people experienced a hundred, a thousand, and ten thousand years ago. Yet we blithely accept that our health issues – which so many of us share – are genetic. Genetic, a term we’ve internally defined as beyond our control. Whether out of convenience or ignorance, we’ve failed to address the habitat in which our genes dwell, and the impact of the way we move on the state of our health. (Bowman 2014a: 25, italics in original)

However, in her explanation of how various loads affect our genes, Bowman nevertheless indeed, once again, provides a both detailed and intriguing depiction of our bodies’ interconnectedness with a sociocultural-physical world. In addition to her metaphors, Bowman, who explicitly emphasises her aim of translating advanced research into a simple a language as possible without reducing it so much that meaning is distorted (Bowman n.d.-b), helps us understand necessary biomechanical terms and processes by means of self-illustrated sketches on her blog and a language decorated with various puns. The numerous boxes with definitions, clarifying examples, or anecdotal details that are inserted in all her books fill a similar clarifying function. In the Move Your DNA chapter that explicitly describes how movement and loads affect our DNA, many of these textboxes concern the bones in our bodies, probably due to their less intangible and abstract character than the human cells. One such supplementing text gives us the story of bone robusticity. Bones are not bones are not bones, we are told; while the gene might determine the fundamental shape that enables us to recognise a specific type of bone, there a tons of “nuances” that this body part can take depending on what it has been up to throughout its life. Horseback riders, for example, have a different shape and density to their skeletons than non-riding people. “Skeletons are a sort of
‘living story’ that you are continuously writing. Bone robusticity is a result not only of genetic data, but of data created via behaviour.” (Bowman 2014a: 38)

Cells, we get to know in the main text-stream, have their own kind of skeletons – cytoskeletons – that are transforming in a similar way. As already described, movement in all forms, but also furniture and clothing, create, Bowman argues, unique loads on the tissue, its cells, and these miniature frames; loads that generate mechanical signals that the cell and its DNA respond to. Lifting ones arm, sitting still in a chair, or the movement involved in raising our bodily hair when we get goose bumps – according to Bowman, all these activities communicate through the cytoskeleton and cause its cell to act in a specific way; affect the cell’s regeneration. Thus, she writes, our environment does not only shape our bones, but every part of us: “Most cells depend heavily on mechanical stimulation. The loads placed on the body via movement translate into loads on the cells themselves, which creates cellular data, and it is at this level that change – in the form of strengths, densities, and shape – occurs” (Bowman 2014a: 36).

Indeed, Bowman’s description of bodily matters lends itself to Karen Barad’s (2007) understanding of intra-activity. Because, as we have seen, Bowman teaches us how movement and gravitational forces create unique loads on our cells in ways that are determined by the particular shape that the body has at that particular moment. Yet, this particular bodily shape is, she also explains, determined by all the loads that have ever acted upon it, including the current one. “Your body is never “out of shape”; it is always in a shape created by how you have moved up to this moment” (Bowman 2014a: 36). Thus, rather than an inter-action, where two autonomous units meet, the cell and the load are constantly being co-created by each other; they intra-act. They participate in a mutual performance, where the bodily matter and its internal loads are no longer the “primary ontological unit[s]” (Barad 2007: 139). There is no fixed boundary between them, no beginning or end to their dynamic intertwining. What we have is a constant reshaping of the matter-load relationship, an in time and space infinite dynamic cluster of inseparability.

While there certainly must be better and worse ways this intra-activity can occur, Bowman’s owner manual, however, apparently makes surprises avoidable. The ways we utilise our bodies seriously mismatch what the cells require to get adequate load stimulation, Bowman explains (Bowman 2014a: 38). “Illness is typically looked at as physiology gone wrong. I assert here that in most cases, our physiology is responding exactly as it should to the types of movement we have been inputting” (2014a: 21). To support this claim, the bone robusticity textbox tells us that the bone-building process itself is not faulty in patients with
osteoporosis. These conditions are local and occur on the parts that have not been loaded sufficiently enough.

The current epidemic of osteoporosis – specifically loss in the wrist, ribs, spine, and head of the thighbone – speaks volume of how we move. Our cultural patterns of localized bone loss (osteoporosis is not typically a body-wide failure to make bone, which should be a huge red flag for bone-disease researchers) are what you would expect from the loading patterns we have in common. (Bowman 2014a: 38)

Consequently, Bowman visualises a future where a whole range of so-called affluent diseases, including cancer, are going to be discussed as “diseases of mechanotransduction”, results of non-optimal body-load intra-actions (2014a: 31, italics in original). And, Bowman seems to think, these discussions will also lead to the complete answer. Because, on the contrary to environmental humanities scholar Stacy Alaimo, who also emphasises the intra-active character of our environment and resents the common notion of it as merely background (Alaimo 2010: 2), Bowman does not think of the unwanted effect of the body-environment intra-action as unpredictable. As undesired as various health conditions might be they are not at all unexpected, rather “natural” consequences (Bowman 2014a: 38).

Separating nature from contemporary culture indeed reduces the equation variables. While Bowman predicts that this focus-shifting knowledge eventually will “help scientists in designing more specific load-intervention therapies”, she underlines the importance of us learning how to avoid problems occurring in our complex bodily systems in the first place. With teleological advices we are alerted on the significance of engaging more of ourselves in movement. “That your body decreases tissue in response to decreased load is an indication of its metabolic savviness. Why should you expend energy maintaining tissue you don’t use? ‘Use it or loose it’ is physiologically sound advice” (ibid.). In Move Your DNA Bowman does have a disclamatory text box on teleology that informs us on the intentionless nature of the physiological mechanism. Yet, for comprehensibility, she deems it useful to deploy purpose-loaded expressions (2014a: 12). This clarity also points us in a distinct direction. We do not only need to move in more ways. There is apparently an optimal type of cellular usage that Katy Bowman has the recipe for. It is, she argues, found by looking at the movement-patterns of our ancient hunter-gatherer ancestors (2014a: 36).

Except for her self-invented metaphor on diseases of captivity, Bowman does not mention many things that connect the biomechanical details of how bodies get shaped by their load environments to this prescription of a more natural past. What we get is a reference to
vague and anonymous “anthropologists” and “medical researchers”, who “have concluded that the way humans move now is drastically different from how humans have moved over the bulk of the human time-line” (ibid.). Even from a positivist perspective, this certainly is not a proof for the more adequate body-environment intra-action of ancient hunter-gatherers. Yet, I argue that the details on our, highly naturecultural, cellular processes enable Bowman to offer the Palaeolithic imaginary a, for a Western contemporary time, necessary air of scientific profoundness. That we are pervasively affected by our biomechanical environment is sufficient to bolster the imaginary of our contemporary health conditions as not only relating to inadequate loading, but inadequate in relation to a more natural Origin.

**Exit: creating the natural**

As several de/constructionist and new materialist scholars have shown, the natural is a constructed site for projections (cf. Latour and Woolgar 1979; Haraway 1989, 2003). Often called upon as an authentic and context-independent fact about our existence, the natural, these theorists emphasise, constitutes an effective tool in the normalising of ideologies. Where the de/constructionists emphasise that sociocultural aspects determine the meaning and understanding of nature, feminist new materialists stress that there are physical agencies to consider, but that these are and have always been intrinsically intertwined with our sociocultural world (Åsberg, Hultman, Lee 2012: 32-34; Lykke 2010: 107-122). Thus, nature cannot be separated from our cultural world. No matter how effective and widespread, every reference to a fixed and essential natural is a fantasy. With Haraway’s words, we are naturecultural beings; inseparable compounds of physicalities, semiotics and discourses (Haraway 2003).

In this chapter, however, I have shown that an understanding of us as naturecultural beings actually can co-exist with and reinforce an essentialist construction of the natural as dichotomously separated from a contemporary culture. I did so by zooming in on Katy Bowman’s popularised biomechanics, which emphasises our bodies’ entanglement with sociocultural-physical load environments in the referencing to a definite natural existence as determined by a hunter-gatherer Origin. Throughout this chapter I have argued that Bowman, through her pervasive account on our bodies’ affectedness by their biomechanical environment, effectively reconfigures and builds credibility for a widespread contemporary Palaeolithic imaginary.
NATURAL RESPONSIBILITIES

The reason I am so passionate about natural movement in (very) early childhood is because this is where many patterns are set that dictate many later-in-life health outcomes. Actually, my preference would be for us all to consider return to more natural movement before getting pregnant — making this an actual healthcare goal — as it is the maternal environment’s structure that determines the developing skeleton’s ranges of motion and position limitations in the uterus.

But, alas, I am only one woman and can write only one book at a time. The first is one for adults, wanting to uncover their own personal reflex-driven body. Look for the kid book to come after that. And the pregnancy book to come after that.

Who’s going to volunteer to clean my house and take showers for me?

- Katy Bowman, ”#AHS13” (2013)
Entrance: implications

Following Bowman has been a roller-coaster experience. The significant progress in terms of minimised pain and increased strength and movement abilities that the changing of the way I move in my everyday life and the performing of regular, specific and detailed exercises have enabled, has proven to be addictive. I constantly feel I want to learn more from Bowman to get even stronger and capable in my body. In the last few weeks I have been able to do an exercise I have struggled with for almost two years. I no longer get the intensive neck pain and headaches for several hours after I do it. Finally it seems like I have sufficient muscle length, have built necessary strength and have made the right neural connections to perform it correctly. It even feels good to do it. When it first happened I immediately felt that all the struggles were worth it. My hope and ambition for further progress instantly increased. Yet, I still cannot get rid of my hesitance. I am well too aware of the risk of backlashes – have too much experience of misinterpreting the circumstances. How often have I not done exercises or movements, thinking I did something slightly more right than before, only to feel after a while that my joints have become even more unstable or my core muscles tensing worse than ever; making it hard to breath even? What if this is not progress after all; just me fooling myself that I am on the right track, only to notice tomorrow that I have reinforced the problem?

While the pain or instability itself is frustrating, when they appear they foremost tend to make me feel miserable for not making it. I feel guilty and ashamed of not being able to get my body to respond the way it is supposed to according to Bowman’s prescription. But I also feel angry over the instructions and rules that put this confusing and painful result in my lap to fix on my own; angry over the disclaimers on one having to listen to one’s body; angry over statements that if patience is so hard it probably is what one needs to practice the most; angry of it never being possible to fulfil the complete instructions, making every pain sensation my own fault.

Another feeling I have become accustomed with the last couple of years is the fear that my children’s bodily health will become restricted in a similar way as mine. Indicated by the quote on the previous page, Bowman emphasises how every load environment should be optimised, even the one of our unborn babies. (But she also lets us know that her life too is messy and that she struggles to find time for what she aims at achieving.) As I will elaborate on in this chapter, Bowman’s interest in how loads influence our bodies is conveyed with a long list of habits that she argues negatively affect our long-term health. The fact that it is
impossible to know the impact of these differences in life-style-related loading does not serve to keep me calm. Rather, reading Bowman’s extensive hypotheses of the significant effect that certain routines and equipment especially impose on the vulnerable and developing bodies of children often makes me want to eliminate potential risks. And as these risks are so many in Bowman’s world, it makes for a lot of priority-makings. For example, while buying expensive flat, flexible, wide, and unsupported kid’s shoes without toe-spring I, perhaps too often, let my kids sit in the stroller for my own convenience of getting somewhere faster and easier. Taking decisions like these are tiresome and always come with an anxiety that the chosen alternative will harm my children’s bodies.

While there indeed are a lot of emotions involved in following Bowman, giving up this journey is, however, the least I want to do. I have tried so many other ways to get rid of my chronic pain and Bowman’s teaching is the only thing that has truly given result. I love that I can work at my computer again, move more freely, and play intensively with my children on the playground. While it might be frustrating and lonely and not possible to manage to follow all her suggestions or achieve the promised results, I am grateful for having been given a new understanding for my bodily limitations and shown how movement can be more than a compartmentalised fitness regime. I continue to navigate between hope and mistrust, relief and pain, joy and irritation, excitement and angry frustration. Following Bowman, for me, means living with intense feelings and sensations, often many of them at once.

In this chapter I will explore some of the mechanisms in Bowman’s teaching that tend to encourage this mixture of feelings. I will do so by describing what Bowman’s understanding of the natural as both intertwined with and separate from contemporary culture implies in terms of how we should live in our present time. Stressing our bodies’ viscous yet transformable character, Bowman promotes a comprehensive movement and life-style program. Influenced by a general Western individualised health discourse’s emphasis of personal responsibility for one’s health, this program, on the one hand, have demanding classed and gendered implications. On the other hand, though, I argue that Bowman destabilises a masculine understanding of the natural as athletic and tough; she offers effective tools for individuals who feel they lack influence over an ineffective and limited conventional health-care’s treatment of their conditions; and, she gives a welcoming new perspective on how collective load environments affect our health.
Viscous bodies

As we have seen in the previous chapter, Bowman’s conceptualisation of our active and intrinsic corporeal relationship with our load-environment stresses the viscous nature of our bodies. According to Bowman, while loads indeed shape our bodies, this shape in turn determines how new loads can act upon the body and transform it anew. We are, she argues, dynamically reshaping our embodied selves in relation both to a current load environment and to materialised earlier body-environmental experiences. Thus, Bowman’s view of our bodily malleability distinguishes itself from circulating narratives about how our continuous cellular renewal makes our bodies almost endlessly plastic (cf. Encyclopedia blog 2010; Ulrika Kostkonsult 2015; Vetenskapsrådet 2014). Such stories emphasise how all our cells are exchanged over a period of a few years, and often come with a fascinated wonder whether we then really are the same persons anymore. In Bowman’s world we most certainly are. Our history, she argues, is literally written into our bodies.

However, as I have described, Bowman connects this naturecultural understanding of our bodies’ relation with its environment to a nature-culture dichotomy. To get the benefits of copying our imagined hunter-gatherer ancestors’ lifestyle – i.e. not only hurting ourselves or worsen our current conditions – we, according to Bowman, need to take these complicating and lingering material effects of previous body-load intra-actions into account.

In the following chapters I highlight missing behaviours like barefoot time, squatting, walking on natural terrain, and hanging and swinging from your arms. I’m going to explain how the mechanical environments created by these activities are essential, and I’m hoping to do such a good job explaining that you’ll want to go and do these things immediately. But I’m going to ask that you don’t, and here’s why: Your current body is totally unequipped to adapt without injury. Or, maybe you can muscle through a lot of it, but generate a bunch of compensating mechanisms – mental programs that make it harder for you to find your reflexive strength. (Bowman 2014a: 78)

Since we have been shaped by every position and movement undertaken throughout our life there are, Bowman stresses, limits to how we can move after having spent whole lives out-sourcing movement (2014a: 3) and letting sitting be our “most-practiced skill” (2014a: 32). Like a straitjacket of tight tissue (and over-stretched ligament-seams) we cannot get into our optimal ranges of motion when we eventually do stand up to walk. Most of us do not even walk when we think we are, Bowman explains, but perform a certain form of compensatory falling: “Just as the cyclist makes super-fast corrections to a thousand invisible almost-falls,
someone walking with a body weakened by modern living makes corrections to one fall after another” (2014a: 183).

Yet, as I will expand upon below, our bodies’ viscosity does not, Bowman emphasises, imply that we are completely doomed by our life-stories and can only avoid future damage. According to Bowman, our bodily shapings are “semi-permanent” (Bowman 2014a: 69); the unnatural manifestations of our previous modern activities are, she argues, to a large extent reversible. “By applying basic exercise-science principles, you should be able to improve your health while undoing old adaptations – without injury” (Bowman 2014a: 78). By means of diligent use of detailed techniques that Bowman has put together for us, we can, she emphasises, control our health.

**Controlling the outcomes**

While our contemporary sedentary life-style, according to Bowman, is the root cause of most pain and health conditions, she argues that one of the most significant ways these ailments explicitly come about is through bad alignment. Alignment, Bowman tells us, concerns how different parts of the body relate to each other and the ground (Bowman 2014a: 87). This is, we learn, a science that looks at the load and force effects within the body imposed by the alterations of different body positions (ibid.).

Illustration of the twenty-five alignment markers (Bowman 2010).
The reasoning on body alignment is indeed interesting from a feminist perspective. Because, what Bowman explicitly addresses is our bodily interconnectedness and dependency. To help us assess our bodily alignment Bowman teaches twenty-five alignment markers. These are located on bony parts on our bodies and should, according to Bowman, be oriented in a particular way in relation to each other for us to get optimal health (Bowman 2010). This mapping of out of our bodily parts’ inter-relation enables an intriguing insight into and respect for our physical vulnerability. Because, rather than, as is commonly the case within conventional biomedicine, treat problems in different bodily parts as unrelated (Einstein and Shildrick 2009), Bowman assesses the whole body’s alignment in order to capture how tensions and imbalances in one area can cause friction and inflammation in others. Bowman’s whole body alignment thus has strong overlaps with feminist emphasis of our bodies’ unbounded character, both to the outside world and internally (cf. ibid.).

To enable us to regain the balance in the alignment markers, Bowman has designed a program of Restorative Exercises that, she argues, undo the harmful effects of our common repetitive habits. By “gentle yet effective” stretches and strengthening exercises, where a great amount of focus is put on keeping the alignment markers in place, short and weak muscles of the feet, calves, hamstrings and pelvic floor are said to be lengthened and internally rotated shoulders and thigh bones slowly unwound (e.g. Bowman 2014a; Bowman 2011a).

However, the work does not end with an everyday exercise regime. To be truly effective, Bowman emphasises, we do not only need to work on recovering from the negative consequences of our earlier inadequate habits; we need to prevent them from occurring in the first place. “You can spend twenty minutes stretching your calves every day, but if you keep putting shoes on that shorten them back up again, the ratio spent lengthening to shortening your muscles is not in your favour” (Bowman 2014a: 104). Every position and every passive load form us, Bowman stresses (2014a). What we do most forms us the most. It is therefore important to consider how we move, sit, lie, and what we wear, all the time; that we let this shaping be as good as possible (ibid.).

And, as we know by now, with good, she refers to a natural past. The list of things to consider is long. For example, Bowman stresses how we need to ditch our chairs and sofas; transition out of restrictive clothing such as bras or even the slightest elevated shoes; and phasing out our beds and pillows (ibid.). Yet, this splitting up of nature and culture is less present in Bowman’s other emphasis. Because, in addition to clothing and furniture, she also talks about the importance of being aware of and actively preventing our bony markers from
habitually leaving their optimal inter-relative positions (e.g. Bowman 2011a; Bowman 2014a). While typing on our computers, cooking dinner or laughing with our friends we should make sure that we have neutral pelves, externally rotated arms, wide shoulder blades, ramped up heads, etcetera, etcetera (ibid.). And, Bowman stresses, it is not only while we are still that we need to mind our alignment. Rather, stillness is what should be avoided. “In the context of our bodies alignment is often confused with posture, but as with the car, correct human alignment does not imply that there is one body position that we should be using all the time. In fact, it is often our determination to maintain a ‘good’ fixed posture that is undermining your health” (Bowman 2014a: 88). Alignment work thus needs to happen all the time; we continuously need to correct ourselves during our everyday go-abouts.

We have to, Bowman emphasises, stop think of movement as a three hour a week exercise regimen and start looking at it in terms of our continuous relation to our body-shaping biomechanical environment. In fact, she argues, much of the exercises we associate with health is actually causing our bodies more harm than good. “Exercise does not always make every part of us better. What can be good for the mind might be hard on the knees. What can be nice for the waistline can cause your pelvic floor to fail. What can serve as a mental escape now can cause mental anguish down the road” (2014a: 52).

Stressing the environed character of our bodies, Bowman also interestingly deconstructs hegemonic understandings of what constitutes good cardiovascular training. Bowman expands upon how a simplification of the cardiovascular system in anatomy and physiology textbooks has lead to widespread misunderstandings. The illustrations most of us are familiar with only depict the arteries and veins and leave out the smaller vessels directly involved in the oxygen delivery to our cells. Thus, Bowman writes, most of us have come to believe that the heart pushes the blood around in the body and are unaware of the vital role of the musculoskeletal system (2014a: 58). According to Bowman, the problem with this is that we as a result of this belief aim at training our hearts with so called “cardio” training, which, she argues, not only does not bring oxygen to our whole system and overburdens our hearts, but also, in our non-aligned bodies, causes unfavourable turbulent blood flow in our arteries, which contributes to plaque formation in areas with complex vessel geometry (2014a: 61). “In fact, cardio – a lot of it, consumed in isolation of all other movement – can be a turbulent-blood maker! Instead of short (relative to the entire day) burst of high-intensity exercise, consider moving in a way that gets your blood moving (which is good) throughout the day …” (2014a: 64).
Drawing simultaneously on her insight into the forces, flows, and other biomechanical aspects involved in various kinds of bodily movement; and, on an imagined natural Origin, Bowman not only holds that we need to walk more frequently. Because, while she argues that walking is essential for our bodily function (Bowman 2014a: 183), she also points at how movement includes more than transfer. There is, she also says, more to consider than the interrelation of bodily parts. As mentioned in the introduction, one example that Bowman has stressed a lot lately is vision (Bowman 2014a: 148; Bowman and Hemmat 2014a: 18.50; Bowman and Hemmat 2014b: 18.24). The extensive time that many people spend in front of screens, books and other near-placed objects creates tensions in the eyes, she says. Over time the ability to see on far distances is gradually lost.

So your eyes adapt to that and then they loose the ability to see far away – really far away – which requires a certain relaxation. So in the same way that it is challenging to get your psoas to relax or your calf muscles to relax to accommodate non-heeled shoes, it becomes difficult to relax your eyes to see really really far away because you just don’t practice that range of motion. (Bowman and Hemmat 2014b: 19.34)

Bowman encourages us to cross-train our eyes while walking (which means looking as far away as possible in different directions while keeping our heads still), to take frequent eye breaks if we work at a desk, and to limit time spent looking at close objects like screens or books (Bowman 2014a: 149; Bowman and Hemmat 2014a: 18.50). The eyes sit where they sit. Yet, their muscles can still be out of their optimal state. When talking about the effects of loads it is, Bowman says, important to consider our whole system’s interaction with its biomechanical environment. In addition to the location and direction of loads, the magnitude, duration, frequency, rate and variability also impacts what will be the outcome of our genetic View-Master disc (Bowman 2014a: 18, 28). True wellbeing, Bowman thus emphasises, requires certain types and dosages of different kinds of loads, the optimum of which, she argues, we find in a natural past.

Bowman’s health prescription indeed conveys both naturecultural and nature-versus-culture understandings. What they boil down to is an emphasis of health as reachable through adherence to our changeable context. If doing her corrective exercises; if adopting a frequent and wide-ranging variation of aligned sitting positions and walking (the latter on non-flat “un-artificial” surfaces and eventually in barefoot shoes); if minimising screen time; and, if increasing time spent in a vitamin D-giving and long-distance watching-enabling outdoors, health, Bowman tells us, is ours to get (Bowman 2014a).
Health as duty

Bowman’s prescription of a continuous alertness to and adjusting of the embodied self can be read in the light of a Western individualised health discourse. Since the nineteen seventies, an increasing amount of health responsibility has been transferred over from medical doctors to the patients themselves (Stacey 1997; Rose and Novas 2002). This relocation of responsibility relates both to the activism for more influence over the own body in the context of an authoritarian biomedical practice (Stacey 1997: 209), and to scientific discoveries on the malleability and manipulability of bodies that have made determinist understandings impossible (Rose & Novas 2002: 5). Because, as this activism and new knowledge have coincided with new liberalist currents – with a dismantling of the social well-fare and stress of the agency of individuals over their faith – it has, as Jackie Stacey points out, become difficult to keep the aspiration of influence on a collective level (Stacey 1997: 209), or, as underlined by Rose and Novas, not to act upon the risks and possibilities of ones own manipulable body (Rose & Novas 2002: 5). From being viewed upon as a question of right, health has since the later half of the twentieth century become an issue of duty (Stacey 1997: 227). We are expected to inform ourselves with regards not only to our current diseases and ailments, but also to our vulnerability for different conditions. And, based on this information, we are supposed to make necessary adjustments to minimise different health risks and activate our health potential (Rose and Novas 2002: 5).

In *Move Your DNA* Bowman (2014a) also explicitly addresses responsibility in this individualised spirit. While Bowman argues that biomedical practitioners indeed miss an accurate understanding of the gene and still talk about our DNA as destiny, their role does not, she writes, require that they learn the broad and complex details of biomechanics.

Doctors already have to go to school forever to be able to recognize an emergency, as well as the rarest of all pathologies, in all humans. It’s ridiculous to expect the medical community to also be responsible for learning math and physics in addition to biology, chemistry, anatomy, physiology, and how to deal with humans in pain. It’s time to give them a break and take some personal responsibility. (Bowman 2014a: 30)

As if she finally dares to speak aloud on a, for others possibly uncomfortable, conviction, she finishes with “There, I said it” (ibid.).

To Bowman, responsibility does certainly seem to be about making active choices. Even more so, she implies, we must resist our inherent laziness. According to Bowman,
avoiding and counteracting the shaping that our common contemporary culture imposes on our bodies requires that we spend energy, which, she declares, is something we due to evolution have an instinct to conserve (2014a: 3). For our ancient hunter-gatherer ancestors, movement was, she tells us, automatically regulated by a motivation to get food in a place and time where this was not always close-by (ibid.). The way most people in industrialised countries live has upset this regulation, Bowman states. We have become “unnaturally motivated”, as we instead of moving dynamically to get food exercise (in unvaried ways and in altered alignment) in the false belief that it will restore an overconsumption of food (2014a: 51-52). When everything is at arms reach, says Bowman, it is necessary to continuously and actively abandon the instinctive road of least resistance and changing one’s biomechanical environment in ways that make movement become part of accomplishing daily tasks. “In most cases, modern environments do not prevent us from adopting behaviours with better health outcomes. We choose to drive instead of walk. To push our kids in a stroller and not carrying them in our arms. To push food in a cart and not carry it on our back. We slouch into our furniture, and let our shoes support our feet” (2014a: 3, italics in original).

Bowman’s teaching indeed reinforces the individualised health discourse’s tendency to, as Nikolas Rose and Carlos Novas writes, create certain kind of problematic individuals of those who do not act upon the chance of optimising their health potentials (Rose & Novas 2002: 22). By means of an illustrative and often facetious language Bowman not only emphasises the absurd character of our convenience-driven habits, but indirectly also how reprehensible we are if we – despite the, by her provided, new insights – continue with our current behaviour. For example, when describing the effects beds and pillows have on us while we are sleeping, she tells us that feeling sore after changing bed or pillow “is a sign that the smaller joints in your body have stiffened to the point when doing nothing – on a pile of fluffiness – is too hard on your body (á la Princess and the Pea)” (Bowman 2014a: 39). Another, perhaps less humorous, statement is: “Aren’t [your knees] the same age, after all?” with which Bowman, by pointing at how problems often arise in specific places and are not evenly distributed in the body, disputes what she argues is a usual misconception of common ailments as being related to aging itself and not to what we have been doing those years we grow older (2014a: 61). Bowman’s lucid comments are made in an inviting tone, which effectively massages her insinuation – that pain and disease is both induced and fixable by the self, and that passive and outspoken suffering is undignified.

Bowman pushes usual alternative health scene accountability-buttons. Jackie Stacey writes that while the individualised health discourse permeates the whole society, the
alternative health practices more clearly put emphasis on selective and holistic cause-descriptions, where personality and attitude are held as crucial for both contracting and recovering from diseases (Stacey 1997: 218).

In Bowman’s case this prescription of an adequate attitude also functions as a way to navigate the paradox of her means and ends. To be aligned is on the one hand associated with a more natural, in the sense of less tense, relation to our bodies. Once lost however, achieving this bodily balance requires constant manipulation and rules. Bowman does talk about the ideal movement to also be reflex-driven and that practice will enable this also in alignment. And, although it might be a long journey – even Bowman, who has been following her own advice for more than a decade, still finds her pelvis moving forward when getting distracted in church – this is not something to upset about.

Like many of you, I have a constant stream of thoughts going through my head. Many of these thoughts are not in alignment with the beliefs I hold, yet they are still there. So, I love all. I have compassion for all. Except for the person who came in late (pelvis forward). Or the person who doesn’t want to scoot over for me (pelvis forward). Or the person who is texting (pelvis forward). Or the person who is writing a blog in her head when she should be listening (pelvis forward). Why does my hair look so stupid today (pelvis forward).

These thoughts are just old patterns of judgment. My pelvis forward is just an old habit too. Both of these require constant mindfulness. They require the ability to view your physical or mental position, check it against the alignment you desire, and then make any necessary adjustments. (Bowman 2011b)

Even if we end up stuck with our own surveillance forever, that is, according to Bowman, this policing is only a beautiful means to be present in a distractive modern life.

This constant meditative approach to my body is something I have found difficult to pull off. Bowman emphasises how we all can achieve all day movement and still get our work done (Bowman and Hemmat 2015b: 06.50). By creating a dynamic workstation where we vary our positions between standing and sitting, as well as doing some corrective exercises while typing, even those of us who are in front of computer screens all day have solutions. In accordance with Bowman’s advice I do not only strive to stay in as good alignment as possible at my computer. I also try to incorporate different stretches and strengthening movements while I work and to take regular breaks to hang in our gymnastic rings. And, these changes have indeed helped me tremendously in terms of my pain condition. Nowadays I can often work long days without having to spend the evening with headache and a general feeling of exhaustion. Yet, the thing with mindfulness is that it actually requires you not to
pay attention to too many things simultaneously. I get off track with the text in front of me when I continuously think about how to vary my position better or stretch in more correct alignment. Often, I start to think about all the other parts of my body that I am still neglecting. Which gets me to take an extra pause to hang in the monkey bar or lie down to twist. Only to discover, when being back again, that I am even more confused about where I was in the text than before. Sometimes, what is supposed to help me be less constrained in my life, most of all feels like an extra full-time job.

As several critics have pointed out, the individualised health discourse furthers a sort of guilt-culture, where the victim is self to blame for her ache or ailment (Stacey 1997: 220). To Bowman, there seems to be no condition that cannot be prevented through changes to one’s biomechanical environment. Even cancer, a disease that conventional biomedicine emphasises the genetic component of, is something that Bowman hypothesises being primarily related to our lifestyle.

In women, breasts depend on their suspensory systems and the muscles beneath them for support – systems that now adapt to the loads created by the bra, not to the weight of the breast. If your breasts are heavy, there is a greater chance that you’ve been wearing a bra longer, which means that not only are your breasts heavier than other’s, your suspensory system is also weaker, relatively speaking. Interesting, as there may be a link between larger breasts and breast cancer. While researchers are looking to the genome for these answers, I’d like to wave a flag for the mechanome and suggest that they consider the Parable of the Fin of the Orca and load mismatch.

Bra-wearing large-breasted wom[e]n experience loads created by gravity almost identically to bra-wearing small-breasted women. If a bra renders the motion of both large and small breast negligible, large-breasted women are at a greater mismatch between the loads they experience – in the same way an orca with a tall fin is at a greater loss when exposed to unnatural loads. (Bowman 2014a: 40)

While Bowman writes that there are many factors influencing our health, the biomechanical environment is not only, she argues, the most under-researched, but probably also the most important factor (2014a: 30). Thus, while indeed acknowledging that there are many things affecting our health, such as what we eat, drink, smoke, how much stress we are exposed to, and the genes, these other factors get put in parentheses. Combined with the difficulty with which one can fulfil the comprehensive changes that Bowman prescribes, any attempt to criticise the method’s effect gets undermined, as complaints are bounced back to the self, who has always made some kind of departure from the ordination. If one would not have failed to follow the program, the disease or pain would not have occurred, is the motto.
Consequently, people with chronic and non-healing ailments are understood as insufficiently perseverant in doing the job it takes us all to be well.

By stressing the total gains individuals can make by taking personal responsibility for their biomechanical environments, Bowman depicts our health as fully controllable. Refraining from chairs, beds, pillows, tight underwear, conventional shoes, and the rest of things not present in an imagined ancient hunter-gather time, while starting a never-ending aligned movement-schedule of Restorative Exercises, various floor-sitting positions, standing and extensive walking in varied terrain, seems to, in Bowman’s world, be able to cure everything. It is indeed easy to get the impression that the effort to change movement and passive loading habits – perhaps in combination with improvement in diets, and minimised exposure to toxic particles in cigarettes – makes us immune to diabetes and cardiovascular diseases. This can be contrasted with a general biomedical understanding of life-style factors as only being a piece of many that contribute to a persons health and risk for disease. My point is, however, not to argue for who is right and who is wrong, but rather highlight competing narratives. Even more so, I want to address some of the consequences of Bowman’s understanding of the controllability of our health. Because, the mindful self-discipline that Bowman suggests that we engage in is not, I argue, as doable for all as she has it to be.

**Intersectional consequences**

The consequences of Bowman’s teaching on the natural and the healthy are indeed particularly striking from an intersectional perspective. In this subchapter I will start by analysing how Bowman’s conceptualisation of natural health as choice neglects the influence of class. Thereafter I will elaborate on different gendered implications of Bowman’s teaching, namely her depiction of gendered behaviour as optional, and her implied directives on proper motherhood. I will then end this subchapter with an exploration of how Bowman, nevertheless, by contextualising and widening the outlook, also de-masculinises the discourse on the natural as competitive and tough.

**Class**

In hers and Dani Hemmat’s podcast episode *The Solution Show*, Bowman explicitly explains to us that creating more room for natural movement is universally possible (Bowman and
Hemmat 2015b). Whether we are working in an office or being stay-at-home moms, we can, she says, all find small things we can do to break up our sedentary days. Because, Bowman tells us, while we like to think of our situations as constituting specifically difficult hindrances, it is in fact us who are the problem.

The hurdle probably has less to do with what you perceive the hurdle to be, and the fact that [...] mental hurdles are nature’s way of keeping you from changing habits. So that’s why you’ll see that you’ll have twelve people ask the exact same question [...] “I can’t do so much walking, I live in the city”, but “I can’t do so much walking, I live in the country”. It’s like, okay wait a minute, [...] everyone else’s solution seems to be your current lack of situation. [It] doesn’t matter what it is. Like, the grass is always greener. We always perceive that we’re gonna’ be able to change when our live is like X, but it doesn’t really work like that. It doesn’t have to work like that. (Bowman and Hemmat 2015b: 05.48)

Bowman mentions how we can create dynamic workstations, take short breaks at any workplace, change the shoes that we wear to work, suggest walking meetings at the office, and make all our phone calls while walking (Bowman and Hemmat 2015b: 07.26). Stay at home moms can likewise include a lot of movement in their lives if they just stop thinking of movement as a sweaty exercise on their own and see that it counts to also move in a slow pace with their children (2015b: 18.15). While she thinks that varied pace indeed is something to aim for, Bowman tells us that one still can get the higher pace when alone with just one of the smaller kids, which one can bring in one’s arm a couple of miles to the post office to pick up a package. Or, she says, one can start taking brisk walks five thirty in the morning, before the rest of the family wakes up (ibid.).

Bowman does emphasise how time and money are “the biggest limitations” (2015b: 15.27). She also has intriguing ideas on how to free up time and save money through joining and creating communities in which people can help each other in their daily lives (Bowman 2015c). Overall, Bowman’s commitment to find alternative ways of less restricting living is, I argue, a highly feminist ambition. She continuously strives to make life less constraining for people in varying situations. However, while her creative and empathy-emphasising alternatives indeed are welcoming challenges to an individuality-pushing Western economy, Bowman nevertheless tends to ignore the socio-economical structures and dissimilarities in pre-conditions, which tends to make her suggested solutions play into the very same neo-liberal narrative that she partly wants to disrupt.

To prove her point on the possibility to incorporate natural movement in any situation, Bowman takes the example of herself and how her own life-puzzle has not prevented her from moving. She can make it while being a “breastfeeding, stay-at-home, two small children,
full-time working, mom” (Bowman and Hemmat 2015b: 24.32). With an almost upset laugh over people who express jealousy of her nice life with so many solutions, she continues: “I worked my butt off for that”, and, picking up the supportive comment by the show host, Dani Hemmat, Bowman adds: “Everything that I have right now, I have crafted” (ibid.). Bowman also tells us how she, just like so many others, grew up in a context where natural movement was not modelled for her. Her default is to not move at all, but to read and watch entertainment shows on television. Not giving into that laziness is, she stresses, the result of conscious decisions and determined work to make it happen (2015b: 26.45). Nothing is with other words free, Bowman teaches us. You cannot refer to other people having it easier than you, because we all have to work hard to accomplish the natural movement task.

Bowman does admit that most stay-at-home-moms are single parents most parts of the day and that she is privileged to have her children’s other parent at home with her to share the daily tasks with (2015b: 13.17). Her suggested solution for those less fortunate is to invite other people into their home, which, she stresses, does not have to cost any money. She talks about the win-win situation brought about by getting older children in the house. Bowman herself has a niece that often comes over. This, she argues, makes her children much more stimulated and frees her from having to be the single source of inspiration. Thus, she gets time and energy to get her movement nutrition (2015b: 14:45). This certainly is a hands-on advice that can help in many situations. Yet, it still remains within the scope of the individual, who is the one who is to make the necessary networking and personal relations to solve her current over-load. And, when practical tips like these on how to personally change ones situation get presented as the whole solution, they tend to trivialise the normative and structural constraints of class.

Bowman’s view on everybody having, perhaps not equivalent but at least sufficient, presuppositions to change their biomechanical environment, also seems to provoke some people. In the long list of mostly affirmative comments on an online interview by blogger Zoe Saint-Paul (2014), in which Bowman describes her furniture-free home, what her every-day-life with her family looks like, and the reasons to why it can be a good idea to consider this life-style, some upset remarks are posted on how Bowman ignores the more difficult context of many individuals. Some of these comments are directed towards an ambiguous statement on Bowman and her husband sharing their family and working life from home; “a situation we spent years creating” (ibid.). While this announcement, on the one hand, holds an acknowledgement for the difficulty of creating the favourable circumstances one wishes to
have, it likewise opens up for a reading of Bowman as emphasising a healthy combination of family and work as a legitimate and reachable reward for every dedicated individual.

For example, K Durham points at what he argues is Bowman’s privileged satisfaction and how he and many others do not have the chance to create their own circumstances: ”[…] those of us crippled by poorly paid jobs out in the real world, or homes not situated in good neighbourhoods (within a few miles of everything we could possibly need) don’t always have that choice. Perhaps if Katy could get up off her low floor cushions, she could see that” (Durham in Saint-Paul 2014). Similarly, Carmen Lashley finds the idea of choosing to get rid of her furniture insulting after being forced to spend the early years as a mother in an empty house out of economical reasons, and that there is much more aspects to the topic of belongings than own health preferences. “This was not a choice we made, it is called poverty, it is ludicrous to consider this a trend and praise this woman. When things got better for us, after I went to work the sweet baby sitter a woman in her 50s with no education suggested we get furniture and knick knacks, as my children needed to learn to respect things in other people’s homes” (Lashley in Saint-Paul 2014).

As these comments indicate, a risk with Bowman’s emphasis on health as choice is that her foundational message on how our biomechanical environments shape our bodies does not help those who are most constrained. If, as Bowman argues, everything we do forms us, then the health effects of poor life conditions indeed are tangible. Because, no matter how much we can take our movement breaks and ask for help on a theoretical level, there are in reality huge discrepancies in possibilities for creating a good biomechanical environment. To experience a lack of time, money, and social network makes things more difficult. Working flexible hours from one’s home on the country-side, while one’s partner takes care of the household, simply makes for a different set of possibilities when it comes to getting a good dose of the natural movement Bowman describes than what does commuting to several part-time punch clock jobs where seated availability is part of the job description; or what does being a single mom in a cramped flat located in an unsafe neighbourhood with concrete ground. Being brought up in economic security, likewise, does not come with the same potential restrictions to a longing for a downscaled life, as does a past marked by poverty. The different ways bodies are formed depending on such socio-economic aspects is something Bowman could have easily addressed when presenting the extensive influence on our health of our body-load intra-actions. This is however something she misses to do in her devotion to bring out solutions to individuals, which leaves (movement) restricted subjects with the blame for their unfavourably intersecting health- and class-related habits.
Gender as choice

As the example with bras and cancer earlier indicates, Bowman does however, unlike the case with class, have an interest in how gendered habits manifest themselves within our bodies. She teaches us that while everybody benefits from the same alignment, tons of aspects influence how our bodily parts depart from their optimal inter-relational arrangement (Bowman 2011a; Bowman 2014a). A part of these aspects are, she says, gendered practices, such as how we dress, sit, or stand in particular ways to look feminine or masculine. For example, more women’s shoes tend to have higher heels than men’s do. Many women also, Bowman says, tend to stand with their feet closer together than the objective markers suggest, while men tend to have their feet wider than the same marker (2011e: 0.53.07-0.53.22).

In one sense, Bowman’s description of gender fits well into queer feminist philosopher Judith Butler’s performativity theory. According to Judith Butler, biological sex cannot be separated from a cultural gender (Butler 1990: 7). Discursive and linguistic practices involve our bodies in ways that form them and thus, Butler writes, the idea that there should exist a pure, non-cultural, a-historical sex behind the cultural gender is a construct. This implies, she argues, that gender should be understood as doing rather than being – a repetitious performativity in which there is no “subject who might be said to pre-exist the deed” (1990: 25). Butler alike, Bowman depicts gender as a materialising practice. To wear high heels, participate in certain kinds of sports or dances, sit cross-legged, etc. creates, according to Bowman, specific bone densities, ranges of motions and compensatory patterns (Bowman 2011a; 2014a). Thus, gender is intrinsically connected to our biological sexed body also in Bowman’s conceptualisation and her teaching indirectly shows how biomechanics can offer tangible and interesting illustrations of queer theories.

However, unlike Butler, who emphasises the strict discursive regulation that fences the gender performativity (Butler 1990: 33), Bowman views the gender re-citation as being much more in our own hands. The gender directives are, Butler (1990) argues, strictly policed to follow a linear gender matrix, in which our gender is expected to correlate to a biologically given sex and a sexual desire to an opposite sex and its just as expected appurtenant gender. Deviations from these regulations result, she writes, in various forms of punishments (ibid.). According to Butler, we are thus not free to choose the ways in which we do gender, but referred to a set of effective rules on how to enact it. On the contrary to Judith Butler, when Bowman informs us on various fashions’ and behaviour’s negative effects on our bodies, she strictly sticks to encouraging us to rethink our personal preferences. As her comments her
hypothesis on clothes’ loading and cancer indicates, Bowman thinks it is up to each and everyone to decide how much our shallowness and anxiety should cost us: “With recent increases in both breast and testicle cancers … it is extremely important to start having discussions about just how differently we are loading our body for propriety’s (or vanity’s) sake” (Bowman 2014a: 40). It is thus not only health itself that is available by choice, to Bowman, but also our gender norms.

While, as the quote above shows, Bowman addresses men’s habits too, to view our gendered habits as vanity, particularly works to increase the burden on already restrained women. Because women tend to make more sacrifices for their appearance, Bowman says. In one of her blog post on what worsens a diastasis recti, Bowman ends her example on how she and her addressed reader both know how it is to dress up in tight jeans to look good on a party and then finding oneself ending up holding in gases due to having eaten on an empty stomach, with: “And, my over-the-shoulder-reading husband pointed out that this would never happen to a man. It is simply not in his cultural programming to suffer painfully as far as clothes or farts go” (Bowman 2011c). That it is a cultural programming does to Bowman however not seem to imply that women have any less of a chance of regaining control over their health by choice than men; rather the opposite. Because in addition to describing gendered habits as individual, almost ludicrous priorities, Bowman emphasises that what she teaches us, makes the possible difference in behaviour even greater if one has done more wrong before. “The solution will much simpler than you realize. The difference between you in nature and you right now, reading this book is so great that even tiny adjustments to your loading habits can be worth millions in unspent healthcare dollars and bring about tremendous relief from your load-induced ailments” (Bowman 2014a: 41). Apparently, there are just more things that are possible to change if you are a woman. But also, inevitably, to be held accountable for not doing well enough if failing to be healthy.

Proper motherhood

Bowman’s emphasis on our bodies’ viscosity and her tapping into the general individual health discourse does not only imply accountability for the own body, but also for one’s children. As Jackie Stacey shows, neo-liberal streams stress both the existence of an inevitable and natural drive to take care of one’s family, and how following this drive makes

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15 Diastasis recti is a condition in which the front and top layer of the abdominal musculature separates (Medline Plus n.d.). It is associated with back pain and bulging abdomen and is a common condition among women who have been pregnant (Harms n.d.).
for good citizens (Stacey 1997: 210). For example, Margaret Thatcher defended her party’s politics in the early nineteen eighties’ Britain with claims on how offering more choices to the individual in his building of a better life for himself and his loved ones encouraged the best in human nature (Thatcher and Cooke 1989: 269). Consequently, according to the individual health discourse, instead of expecting from the national state to provide equivalent health care to every citizen, it is up to adult individuals to assure that their closest get what they need (Stacey 1997: 210). As far as Bowman is concerned, the accountability for one’s own children refers to their potential bodily development. Because, while much of our bodies’ “unnatural” shaping is indeed reversible, to Bowman, optimal health requires a perfect start – a natural, Palaeolithic-equivalent, upbringing.

According to Bowman, there is a large discrepancy between optimal health and what the majority of contemporary populations in industrialised countries enable through the way they bring up their children. In Move Your DNA, she describes how most readers probably have had the similar childhood loading-wise (Bowman 2014a: 32). For example, we have, she writes, been placed in bassinets, and various other forms of baby equipment; we have worn diapers and toddler shoes; and, when finally becoming old enough to move more, we have been encouraged to sit in various forms of chairs or spent time seated on tricycles. Often, Bowman emphasises, the equipment surrounding us as young also primarily served the convenience of our caregivers. “Because you were heavy to carry or hard to control, you might have spent fair amount of time in the stroller even when you weren’t sleeping” (ibid.). That a whole population has grown up in this passivity- and chair-sitting-furthering environment has, she says, resulted in many of us never reaching the potential health we could have. And, Bowman emphasises, since the life-style of the young have become even more sedentary in the new generations, the population growing up today have even worse chances, indicated by diseases previously associated with old age now are diagnoses of teenagers (Bowman in Thomas 2013).

This next population coming up, the generation underneath our generation, is in worse health. It is in decline. But yet no one wants to address the huge elephant in the room, which is that we are training our children to be still. Because we don’t delineate the difference between exercise and movement. We have decided that if we exercise for that one hour a day then that is enough. […] we are moving away from talking about the actual problem because we don’t see it as something that can change. So we keep talking about childhood obesity and juvenile osteoporosis and the fact that kids are already having back and knee pain and wearing orthotics and we kind of act like, ‘What’s happening?’ Because we’re not talking about the fact that this is our choice. (Bowman in Thomas 2013)
Bowman compares the load environment that she assumes that most of her readers’ upbringing entailed to the imagined one of our ancient hunter-gatherer ancestors (Bowman 2014a: 34). The fact that no one exactly knows what historical hunter-gather populations lives looked like does not mean, she claims, that a scientific approach cannot give us sufficiently objective evidence of what modifications are necessary to our own everyday living. She points at how present hunter-gather populations as well as archaeological findings offer valuable clues with regards to how we once used and still need to move. That there was not much equipment around back in the days tells, Bowman says, a great deal of what we will benefit from changing in our own mechanical environment (ibid.). Our ancient ancestors were, Bowman continues, probably brought up in a way that incorporated an unmedicated birth, breastfeeding, co-sleeping, “multiple times daily” exercise, and early ability to walk (2014a: 35). They also, she writes, developed core strength from being “exclusively held” and thus got exposed to endless variability of loads from the shifting of body positions. Furthermore, she points out how being carried in this active way furthered the small babies’ exploration of the world. From around two years of age they played, we learn, in ways that copied their gathering and hunting parents; plays that involved squatting, standing, digging, clambering and walking in various terrains – movement patterns that gave them the shape and strength necessary for the awaiting tasks of adulthood. Furthermore, Bowman writes, the Palaeolithic hunter-gatherer’s pelves, hips, and gait were different due to the absence of diapers and baby-equipment, which meant that these individuals, when they eventually became older, had the ability to continue to squat, sit on the floor, and perform tons of walking (ibid.).

Bowman also provides us with many examples from her own parenting and her children’s lives, with which she seems to both aim at showing us – in accordance with the logic that I discussed in relation to class – that it is fully possible to ditch all child-equipment since she can, and showing us the bodily benefits these continuous sacrifices result in for the growing child. In Bowman’s house sitting furniture is abandoned in favour for monkey-bars for the kids to hang in (Bowman in Saint-Paul 2014) and the children learn to associate food with movement, by walking to gather something for the meal outside of the house, if only in the garden (Bowman 2014b). In an online-interview with yoga instructor Nichole Crawford (n.d.), Bowman describes how a “super buff bodybuilding guy” stopped her and her partner after they had carried around their one and a half year old for over an hour at an amusement park. “[H]e came over and said 'How can you carry them that long? That would totally kill my back!' He was way 'stronger' and stronger-looking than either of us, but his strength was
in a particular way” (Bowman in Crawford n.d.). Bowman explains how she and her partner have built the required strength to carry their children by starting when their children were small and weighed little, and by continuing to carry them a lot when they grew (ibid.). She also describes how her children, by having practiced and built strength for so long are able to hold much of their own body weight by clinging on to their parents, which makes it easier to carry them (Bowman 2014c: 37.40).

Bowman emphasises the importance of carefully listening to the child and not pushing it beyond its limit. That her children could walk a mile and hang from a monkey-bar by the age of one has to do with the offering of just the right amount of help and challenge that they were capable of at every specific moment (Bowman in Breaking Muscle n.d.). In a blog post on how to get movement nutrition when travelling, Bowman describes how she, when playing on the beach with her daughter, made sure that she shifted her own sitting positions (Bowman 2015b). After a while she noticed her daughter starting to copy her mothers movements, which to Bowman seems to show how actions speak louder than words. “I was going to write more, but I figure, if my 2.5 year old gets it without an explanation, you can too” (ibid.). By creating opportunities for good movement, encouragement in adequate doses, and being continuously good role models, we can give our children the natural bodily health of our Palaeolithic ancestors, is Bowman’s message.

As Donna Haraway reminds us, drawing equal signs between the ancient past and a fundamental non-modifiable human nature is a “narrative code of evolution … [and] not a fact about change” (Haraway 1989: 328). This code is especially attractive in combination with the inaccessibility of our origin, as it opens up for projections of fantasies about ourselves (1989: 11). In the Western science, such fantasies have traditionally been constructed through dualist pairs of power-laden contrasts, such as us and them, West and East, man and woman, etc.

Haraway emphasises how the sorting out of differences within the field of primatology follows orientalist patterns (ibid.). She draws on Edward Said (1979), who depicts how west has constructed itself through a multifaceted story about a peripheral Origin Orient East – a since long left behind cradle of civilisation that is incapable of representing itself. Europeans, Said shows, have a long history of ascribing, through various practices – not least the scientific ones – the population in the far East unwanted characteristics to enhance the Western identity, which then can become associated with the superior opposites of these traits. On the one hand, the East has been depicted as uncivilised, irrational and crude, but related to these characteristics were also romanticised ideas that held individuals from the
East to be more innocently pure; closer to a more authentic human nature. Said shows that this simultaneous downgrading and romanticising of the Other, is something that not only has served to legitimise colonial oppression in the past, but also prevails in contemporary depictions of subjects from the East as weaker and less cultivated Others.

Similarly, Haraway argues, primatology avails a more primitive Origin simian in order to establish boundaries and conditions of the human potential.

Simian orientalism means that Western primatology has been about the construction of the self from the raw material of the other, the appropriation of nature in the production of culture, the ripening of the human from the soil of the animal, the clarity of white from the obscurity of color, the issue of man from the body of woman, the elaboration of gender from the resource of sex, the emergence of mind by the activation of body. (Haraway 1989: 11)

Haraway shows us how primatology, through this weave of interrelated dichotomies, presents a narrative on our cultural derivation (1989). Monkeys and apes are used in a Western scientific discourse to naturalise hierarchical conceptions about sexuality, gender, nature and culture. Seemingly an account of, by nature given, facts about our more primitive ancestors, the scientific exploration of the simian Other is a powerful imaginary of the Self (1989: 10-12). This simian Other is called upon as human’s authentic and natural Origin, an evolutionary stage that humans have developed from and thus simultaneously are superior to and have remaining, unchangeable, traits from. This imaginary of the Self, Haraway shows, is highly political in that it establishes norms along these axes of sex/gender and nature/culture; norms for what gets to count as a proper family (ibid.).

By contrasting a static natural past to a, by contemporary culture destroyed, presence, Bowman sells us another story on the limits of our civilised life – a fantasy about our fantastic human body potential and its proper motherhood implications. Given a natural mechanical environment, our bodies, in Bowman’s narrative, seem to be able to go on forever, or at least faultless until death comes as a short and painless adieu. Thus, unnatural as we have become, we need to watch out for the conveniences that lurk around every contemporary life corner. Especially, we have to, as we have seen, look out for our little ones, who depend on us to adjust their milieu correspondingly. According to Bowman, as the shaping of our bodies depend on preceding shapings, what we are exposed to in our first few years set the window of bodily opportunities. Thus, proper parenting is of highest importance, so important even that Bowman launched a separate, Paleo Parenting (Bowman 2014d), course.
Katy Bowman compares the load-profiles of bottle-feeding and different kinds of breastfeeding in her *Paleo Parenting* course (Bowman 2014d: 32.26).

Although Bowman does encourage that multiple of people share the burden of childcare, it is clear who she thinks is the most important caregiver. There is indeed an interesting critique in Bowman’s material of the contemporary Western nuclear family ideal where, as she says, everyday living tasks that could be spread out on several persons often becomes the responsibility of one or at best two individuals (Bowman 2014d: 01.15.22-01.17.08). She talks warmly about community building in which people take turn in cooking meals and meet outside where their kids take care of each other (ibid.; Bowman and Hemmat 2015c). Nevertheless, despite this highly feminist strand, Bowman’s examples of how to enable a child to reach its peak health still push the more significant role of the mother. In the long list of things that Bowman argues prevent our children’s bodily potential to materialise, the mechanics of breastfeeding occupies a central place.

[...] the workings of an infant’s mouth while feeding at the breast are different than the workings of an infant’s mouth while feeding off of a bottle. In the end, the task of getting milk is accomplished no matter if you take a boob or a bottle, but the *process* of milking the breast, it turns out, is important to the optimal formation of the jaw and face bones. The structure of the face bones and established motor patterns of the face muscles end up affecting other processes, like breathing and swallowing, as well as the space available for tooth eruption.16 (Bowman 2014a: 47, italics in original)

16 The studies that Bowman bases these conclusion on (Brew et al. 2014; Limme 2010; Lopes et al. 2014; von Cramon-Taubadel 2011) do not all look at the loading created by breastfeeding and one of them also clearly states that further research is needed to be able to conclude if breastfeeding actually has any impact.
Furthermore, Bowman teaches us, the way breastfeeding occurs is important. Because, as ancient hunter-gatherer mothers, according to Bowman, carried their small children close to their bodies a much larger portion of the day, this also means, we learn, that the offsprings consumed their total amount of breast milk in much smaller and frequent dosages (Bowman 2014d: 32.28). They also, Bowman says, nursed until they were several years old. In order for children to get a correct jaw formation that allows for good breathing and enough space for all teeth their mothers, we can clearly conclude from Bowman’s account, need to start taking their irreplaceable roles more seriously than most contemporary women do.

Bowman packs a familiar ferry tale in a new, biomechanical, cover. As American historian and sexologist Thomas Laqueur shows, it is social needs rather than new discoveries that have historically lain behind scientific “proofs” of woman’s inherent role and place (Laqueur 1990). Often such evidences are also accompanied with a beating on the drum. For example, around the time when the demands on access for women to education had become significantly noticeable in the nineteenth century England, medical physician Edward Clarke pointed at the egoism that this requirement implied (Schiebinger 1999: 112). It would, he emphasised, cause women’s ovaries to shrivel and threaten the health of the race (ibid.).

Bowman seems to be aware of how her message may add insult to injury on already exhausted mothers. In the opening of the Paleo Parenting course she also cushions the burden:

This isn’t really a parenting, like how to parent, presentation. This is a presentation on things that influence human development that you might not be aware of. You can decide how to parent however you want. When I talk about a lot of [...] things, especially of what’s going on as far as human development is concerned [...] it tends to bring up a lot of like I, I don’t wanna do anything wrong, I, am I, oh, have I already made a mistake or whatever, and that’s not really the best way to utilize this information. Because when you try to put a paleo, which is an ancestor health perspective, on modern times, it doesn’t really fit super well, because we don’t live in the time, we live in modern time. So you do want to always be reaffirming that you are doing a great job, you’re doing the best that you can. (Bowman 2014d: 0.33)

At first sight this may seem to be a friendly acknowledgement of things not being the mother’s fault. However, as Jackie Stacey points out, disclaimers like these about not wanting to blame the individual weighs little against “[...] the more powerful suggestions of these discourses of personal responsibility [...]” (Stacey 1997: 221). And, Bowman’s conviction about the extensive and negative impact of all “modern” loads indeed points us in quite the opposite direction from her encouraging statement above.
As a parent you are directly affecting the mechanical environment. Because a baby initially comes out with very little skill to create their own environment. That changes later on. But you shape that mechanical environment by the positions that you put the baby in, the frequency of positions that the baby is in - I mean this is something that starts within utero, you’re already shaping the environment – and then the baby doesn’t have the ability to change their body positions relative to the gravitational load. So it’s not just their positions relative to themselves, which is the joint changes that happens at their arms and their limbs, but also the orientation of those limbs relative to the ground. That is a relationship between you, and the baby and gravity that the baby is depending on you to create for them, in order to get this resulting body that allows them to reach their peak development – either faster or just reach it, period. (Bowman 2014d: 05.05)

We might have deconstructed subjective attachment models that emphasise a child’s more profound bond to its mother than its father, but physical, real and hard facts – may be with some creative interpretations into conclusions – show us, Bowman implies, the brutal conditions of reality. Irrespectively of how harsh these hard facts might be perceived as on an individual level, Bowman indeed feels the urgency to tell us that if women do not realise and act in accordance with their motherly responsibility, someone else is at risk.

De-masculinising the primitive

Alongside with essentialism Bowman’s holistic approach does however offer a refreshing input to the compartmentalising masculine fitness trend that, her alike, markets itself with taglines and stories about the functionally primitive.

As I briefly mentioned in the previous chapter, a barefoot running community has gained momentum in the aftermath of Christopher McDougall’s gonzo journalist book Born to Run (2009). In his personal feature on the running Tarahumara tribe in Mexico, McDougall not only argues that running is essential for humans, but also that large shoe corporations like Nike, by pushing their supported and cushioned shoes, have deceived a whole generation regarding what constitutes a good running step to avoid injuries. Minimalistic is the message that has made numerous of people throw out their orthotics and replace their cushioned shoes with two millimetre-soled footwear by “barefoot shoe” companies promising compatibility with the inbuilt shock absorption mechanisms of the foot (cf. Vivobarefoot 2015). Critical voices talk about other types of injuries resulting from this transition, such as an increase in plantar fasciitis, and last year Vibram Fivefingers lost a lawsuit concerning advertisement of scientifically unsupported claims (Bernstein 2014).
Where the debate on the benefits and risks with the minimalist shoes tends to become polarised, Bowman provides interesting contextualisation by drawing attention to our environed bodies’ vulnerability. While she argues that being barefoot is necessary for a healthy body, simply going naked is not her suggestion.

I am a super-huge fan of the minimal-footwear movement, but I am completely surprised at the failure of the barefoot/minimal-footwear community to regularly produce physiological guidelines on how to transition out of conventional footwear – as though the tissues in our feet were somehow different from those found in the rest of our bodies when it comes to adaptation. (Bowman 2014a: 77)

Bowman stresses how most people’s feet have spent whole lives in bulky, compressing and joint-altering footwear and thus are not fit enough to start running barefoot, especially not on the hard concrete-surfaces of urban areas. In order to get the benefits of barefoot movement, Bowman argues that we need to work on mobilising and strengthening our stiff feet. Before we start running barefoot, we need, she says, to first, just like babies, learn how to walk.

In addition to offering a variegating perspective on the barefoot shoe debate, Bowman’s emphasis on our environed bodies’ need of slow transitioning also destabilises a popular narrative on the natural as entirely athletic or tough. While good at avoiding criticising specific persons, Bowman subtly questions the barefoot running community’s idea of us as adapted to long-distance running. She stresses that running is not bad per se, but that it can be if performed in isolation. Running does not, she says, replace other movement needs. In the introduction to Whole Body Barefoot she comments on how McDougall and other barefoot running proponents have succeeded in getting runners interested in changing footwear:

If this is you, please remember that because the loads to your body (and feet) differ when you’re running versus walking, they are entirely different things biomechanically speaking. While running is entirely natural (found in nature), natural running is performed by animals (including people) that have spent large amount of time walking (and squatting, and doing a ton of other non-running movements) – throughout a day, over a lifetime. Which means the strength and shapes of tissue you would naturally be bringing to a “barefoot” run would be affected by copious amounts of barefoot walking – walking that you haven’t been doing. In the same way your toddler-body spent lots of time learning to walk before reflexively attempting running, you need to be building a running foundation that’s larger than just running. For this reason, I’m going to talk about walking a lot more than running. (Bowman 2015a: 3)
This simultaneous pushing of the naturecultural and the nature versus culture is something that also makes her teaching differ from the message of the CrossFit community that has established itself the last decades. While stressing the natural and functional movement of early human ancestors and the importance of variation in movements, this sport also aims at high intensity (CrossFit Nordic 2014). CrossFit is a training form where strength, explosiveness, endurance, coordination, precision and balance is to be optimised by means of a large variety of sweaty gymnastic tasks and engagement with weighty gym equipment, like kettle and bar bells, and medicine balls (ibid.). The community also arranges athlete competitions where the contestants strive to defeat each other in various climbing, balancing and weight-bearing challenges (ibid.).

That challenges are an inevitable precondition for progress is indeed also Bowman’s philosophy. It has, however, another meaning to her. For example, she also believes that squatting is crucial for maintaining the strength and ranges of motion of e.g. a healthy and well-functioning pelvic floor. Yet, she argues, two hundred squats in a row, especially without having worked on releasing our, from extensive chair- and sofa-sitting, shortened psoas muscles, will do more harm than good (Bowman 2014a: 37, 202). Thus, despite indeed contributing to the nature-culture divide, Bowman challenges the connotations that the long-distance running and CrossFit communities gives the natural as Origin, by also lifting to the fore our bodily affectedness by our environment and our previous sociocultural-material experiences.

Bowman’s emphasis on our intertwinement with our load environment offers a destabilisation of the natural as masculine and competitive that bears similarities with what female primatologists have done within their field. Haraway shows how several female (and male feminist) primatologists, by focusing on less competitive and dramatic events of apes and monkeys, told other stories about the natural than the hegemonic stories of the Western science (Haraway 1989). For example, Haraway writes about how Barbara Smuts underlined the significant role that social interaction and friendship play for simians and that Smuts thereby deconstructed the ideology about the natural as being individualistic and about dominance (1989: 374).

It may seem like a stretch to compare Bowman to the group of feminist primatologist writers, who Haraway lifts forward as devoted to non-antagonistic and non-organicist accounts of life. And, Bowman does indeed tap into the, for evolutionary biology, conventional code, through which natural selection is dualistically depicted as happening on either complementary group level or competitive individual basis (Haraway 1989: 373).
It’s my belief that humans have unique food and movement requirements. While we have similar foundational necessities, our intrinsic uniqueness calls for input that fuels and replenishes the way we use our physiology to complete our community job. As with any group of animals, every participant fills a different role – a role that capitalizes on individuals’ strengths. Without a blend of strengths, our species would be vulnerable to gaps in our functionality. Said another way, not everyone needs to be a warrior. Not everyone a nurturer. Not everyone a hunter. Not everyone a gatherer. (Bowman 2014a: 37)

However, when writing about the uniqueness of every individual, Bowman does not only refuse teaching us who is tough and who is not or what gender we are to associate with the “warrior” or “nurturer”. Those who do feel they resonate with athletic feats are also not given any more affirmative attention for their activities than do non-athletes. Rather, Bowman is sceptical to the Western discourse that encourages us to pass our bodily limits in a “no pain, no gain” logic (2014a: 78). And while she does refer just as much to an imagined natural Origin as to our affectedness by our biomechanical environments, her narrative lifts forward less athletic features than other contemporary stories of the health movement around the Palaeolithic imaginary. One of the headings in Move Your DNA reads: “Everyone wants to be a hunter” (2014a: 37). In the belonging paragraph she argues that contemporary humans foremost lack a common, subtler, movement-foundation. Bowman believes that some of us indeed have the potential to become hunterers, but highlights that these individuals will not be pain-free or healthy unless they first learn the art of gathering (ibid.).

My twenty years in the health and fitness field have shown me clearly that some people love (require, even) the demand of intense physical training. There are also many I’ve worked with who wished they loved to exercise, but don’t. But despite how our love for physical work differs, we all have in common the need for fundamental movements and loads – the loads that are not dependent on our constitution or roles, and are similar across the board […] My point is, everyone – even the hunteriest of the hunters – was a gatherer first. When hunter-gatherers are children, their job is to gather. All are successful in this way first. To go forward, we must go back to figure out which movement basics we have failed to practice and which tissue adaptations we still need. (Bowman 2014a: 37)

According to Bowman, that is, we are not only all different when it comes to what we prefer and require movement-wise; there are also movement-basics that we cannot side-step. Real fitness, down on the cellular level, is not synonymous to competitiveness or toughness,

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17 Bowman means that women’s and men’s bodies benefit from the same alignment (cf. Bowman 2011d: 135). She also criticises the bases of various conceptions on women’s bodies as being less adapted for certain movements or athletic tasks (cf. Bowman 2012; Bowman 2015c).
she says. Rather, Bowman teaches us, health requires a low-key adherence to our tissues continuous and slow adaptation processes; a challenge much less spectacular. While Bowman indeed sells us an essentialist story about ourselves, it is of another, less aggressive, kind than co-existing narratives. It is a fiction on natural health as Origin that by being combined with a highly feminist understanding of us as naturecultural beings simultaneously lifts forward our corporeal dependency.

**Acknowledging agency**

While there indeed are, as we have seen earlier in this chapter, problematic consequences with pushing the bodily potential and health as personally manageable, Bowman’s teaching does, however, also offer an energetic and affirmative counter-narrative to a popular conception of subjects as solely ping-ponged victims of their circumstances. Bowman explicitly refuses to play along with a medical discourse on the aged body as beyond rescue other than with surgical procedures that are either performed only to bring with them extensive side effects, or are avoided, due to their high economical cost or health risks.

Issues with our structure tend to arise in our thirties and forties, thus perpetuating the idea that the ailments we have are a sort of “wearing out” of parts, but actually the ailments we experience now, as adults, began long ago. For example, osteoporosis—a disease where bones become less dense (more fragile) and prone to fractures and breaks—is now known as an issue stemming from peak bone mass not achieved in childhood. Millions experience these ailments of affluence—illnesses that arise in cultures with abundant, poor-quality food and poor movement habits—yet expensive research showing (yet again) that we need to move more is rarely integrated in to real life, where the large bouts of inactivity occurs. (Bowman 2014e)

Bowman’s popularity can very well be understood as a widespread longing to gain more influence and better understanding of the own body. As Susan Budd and Ursula Sharma writes, individuals seeking alternative health treatments often do so because they appreciate the possibility to more actively participate in their recovery (Budd and Sharma 1994). They also conceive the alternative treatments more ambitiously aimed towards causes rather than the conventional health care’s heavy reliance of drugs and focus on treating symptoms (Sharma 1992: 41). And Bowman does have tools to change our bodily function—many others with me testify on how they have significantly improved or gotten rid of chronic pain conditions, which is perceived as a far from trifling matter (cf. McLaughlin n.d.; McLaughlin
2015; McCoid n.d.; Rude n.d.). I also want to emphasise how, while Bowman’s examples on how we can change common habits tend to be both moralising and comprehensive, she does stress the fact that we live so far from the optimal that even small changes will bring great results. (Bowman 2014a: 41). That one cannot manage to do it all does not mean, that is, that one is unworthy or disappointing because one only does something. In this lies an admirable hopefulness and acknowledgement of the individuals’ agencies. We may all have different pre-conditions, Bowman says, but no life is meaningless, no one too far down the lane to help.

Bowman’s unwillingness to see us as victims for our sociocultural situations also goes hand in hand with her explicit description of our corporeal agency. As I have expanded upon in this and the previous chapter Bowman’s conceptualisation of our viscous bodies, of alignment and movement, offers a thorough understanding of our bodily limitations. Without arguing that pain perception is independent of cultural influences, there is still more to bodily ache than social inscription. Underneath discourses are pre-discursive “facticities” (Braidotti 1994: 186; Haraway 1991: 200) that affect us, whether we like it or not. I am not alone to have noticed how modifying the way I arrange my body parts in my everyday life and how incorporating more variation and movement while working has improved my durability. Being in a context where I follow and take part in discussions about Bowman’s work, I have read many accounts on how various, often chronic, pain conditions have gotten significantly improved from doing the Restorative Exercises and changing everyday habits. After years of chronic pain many individuals, including myself, finally feel better.

Bowman’s teaching is also an important counter-voice to the deceptive discourse on quick fixes – either medical surgical ones or those promised by various exercise programs and popular media; a critique that underlines how our ignorance of our bodily pre-conditions gives much felt consequences. While it might feel instrumental sometimes to continuously correct one’s own alignment – while it might be hard to write while simultaneously concentrating on doing various Restorative Exercises – these sensations are also a result of the difficulty to combine alignment and movement with another, just as a mechanical concept; the expectation that the human body should be able to continuously produce value, to be abled in the way that result in a, for everybody, equally predefined quantity and quality. It is wearisome to have things interfere with this wish to be independent and unimpeachably functional individuals. Nevertheless, such dreams are deceits. The way working life is structured in industrialised countries cause many individuals to experience substantial and limiting corporeal impacts, bodily sensations that also often are supressed only to accumulate into an intense and persistent pain condition that in some cases significantly reduces the
ability to think – ironically, make us even less productive. Bowman’s program may be disciplining, and hard to fully incorporate in the current working structure, but this discipline has also given many others with me more (bodily) freedom.

**Collective actions**

This analysis of Bowman’s emphasis of our personal responsibility for our health might also give the incorrect impression that Bowman is totally unaware of, or lack the will to influence, the structures and institutions that surround us. While she does stress that change is the result of initiatives, she also argues that modifications in habits often require reconsideration and rearrangement of common cultural practices. For example, Bowman stresses how we must rethink how we organise children’s school education. The extent kids are expected to be still in the exact same position in school today prevents them, she argues, from reaching their peak bone density. Thus, she underlines, it is important to talk about osteoporosis not only as caused by something else than aging itself, but also as more than an individual life-style problem. The problem is indeed, she says, the larger arrangement of how we conduct our learning and working activities. “It is a waste of money and time to research the epidemic of poor health in children if we fail to acknowledge the role parents and educators play in cultivating stillness in these young humans. We must challenge the deeply seeded belief that children have to stay in their chair in order to accomplish educational goals or be perceived as well-mannered” (Bowman 2014e). Bowman problematizes the civilised order that kids are forced into; she shows how the critical thinking current secularised countries emphasise when it comes to abstractions and beliefs must be expanded to also incorporate bodily practices. And, for this work to be effective, we need, she says, to work together to change our common biomechanical environments.

To accomplish this change Bowman utilises many of the mechanisms that distinguish the contemporary individual health discourse. Rose and Novas write that the current Western emphasis of life-style factors’ influence on our genetic outcome and celebrating of prudent yet enterprising individuals have resulted in patients educating themselves in their diseases and organising themselves in ways that destabilise a traditional authoritarian medical practice (Rose and Novas 2002). The information these individuals consume consists of both medical descriptions on various methods and of personal narratives by persons with the same condition. The power these communities have gained is also, Rose and Nova argues,
harnessed by actors with some kind of value at stake. For example, pharmaceutical companies sponsor internet fora and encourage people to ask for their branded medicines on their next visit to the doctor (2002: 17). Bowman moves in a space between authority and individual activism. She is a representative for an underground movement that offers new treatment alternatives for life-style diseases and pain conditions, but she is also a professionally educated expert – more than a well-informed patient. As such she does however make use of the huge mass of other patients that actively engage in their symptoms and sensitivities for various diseases. Bowman’s mass-education ambition creates momentum.

To certain extent Bowman exercises a “political economy of hope” (Novas 2001 in Novas and Rose 2002; Novas 2006). According to Novas, this is both a traditional economy and a moral one, which serves to get people to influence actors within the established science field. In Bowman’s case, the political economy of hope does not involve a request for donations of money to certain research funds, but rather an appeal for help in creating interest and integration of Bowman’s biomechanical perspectives from as many locations as possible; help in creating incitement for more resources going to biomechanical research from grant review boards and for changes in biomedical understanding, attitudes and practices.

This, disciple-based activism, I argue, is a well-needed and effective challenge to hegemonic understandings. Taking my cues from Rose and Novas, I understand this individual and collective engagement in spreading Bowman’s conceptualisation of our bodies and health, rather than as “narcissistic self-absorption” (Rose and Novas 2002: 21) in one's own condition, as an admirable seriousness in ethics and moral with regards to how we can meet our bodies’ limitations with more helpful methods. We need to change the biomedical conceptualisation of the human body and look for ways to organise health outside of the traditional health care. Bowman shows how the Cartesian understanding of the body – i.e. an understanding of the body as being built-up by independent and exchangeable parts – causes problems when it comes to address chronic lifestyle-related conditions. She points at the necessity of looking more to the interconnectedness of the body and at how we can create pre-conditions in terms of environments for health, rather than treating the symptoms that various unsustainable circumstances result in. Because, the very same enterprising spirit that Bowman utilises to spread her message, she also questions. She turns the light on the consequences of a production-preaching society; she asks implicit questions about what use we will have for any economic growth when it so evidently does not suffice to cover its literal and corporeal health costs. That she, in the wait for this change can offer tools to handle such an unsustainable societal arrangement, does, I argue, make her well worthy of attention.
Exit: moralising conceptualisation, liberating tools

With a focus on the intersectional categories of class and gender I have in this chapter explored some of the consequences of Bowman’s understanding of the natural as simultaneously intertwined with and separated from contemporary culture. Bowman argues that our bodies’ viscosity – that our earlier load environments determine the shape and health of our bodies – implies that a lifestyle can only be healthy if we adhere to the current limitations of our bodily tissues. She teaches Restorative Exercises and promotes a careful transitioning to a more primitive way of living. Finding her clues to healthy movement in an imagined ancient past, she gives hands-on advice on how to alter our everyday living. Combined with an individualised health discourse that emphasises personal responsibility for the self and one’s family, Bowman’s teaching tends to trivialise the power-loaded character of certain material-discursive intertwinnements, which puts extra burden and blame on already vulnerable subjects. However, while her teaching reinforces classed and gendered oppressions – such as giving extensive suggestions for proper motherhood – Bowman also destabilises hegemonic understandings of the natural as athletic or tough. Furthermore, she acknowledges the readiness and capability of chronically suffering individuals to make extensive life-style changes to feel better, aims at targeting causes rather than symptoms, and offers people influence over their own treatment by means of effective hands-on tools. Finally, she also questions the structural arrangement of most schools and work places, which by eliminating opportunities for people to adhere to their bodily limitations gives rise to many of our contemporary health problems.
A spinal twist is a pretty common exercise to find in yoga or back-health classes. But I’ve seen how most people “twist” their spines, and I’m compelled to chime in.

A “twist”, by definition, is the rotation of one part relative to another. A spinal twist, then, is one in which each vertebrae of the spine rotates a small amount to create a net motion that places your rib cage in a different plane than your pelvis.

The spinal twists I’ve witnessed, however, are better called spinal rolls. In the case of a spinal roll, the entire spine (and torso) rotates as one, until the pelvis and ribs are in a different plane from where they started, while the arm reaches back to where everything came from, in the hopes of placing a twist on the spine. This roll move has value, but it differs from a spinal release (a real spinal twist) in that rolling the spine doesn’t create twisting loads between the vertebrae – a necessary step in restoring the vertebrae column’s twisting action. And, more importantly, the inability to twist speaks volumes about the tension, again, in the abdomen.

- Katy Bowman, Move Your DNA (2014a: 153)
Katy Bowman teaches the twist in her *Alignment Snack* video: *Let’s Do the Twist* (Bowman n.d.-c).
Twisting

The work with this thesis has in many ways resembled an attempt at twisting. Not only has this research process been very corporeal. Indeed, the focus on Katy Bowman’s popularised biomechanics has involved an intense engagement with bodily matters. So has the handling of my own musculoskeletal limitations during the writing about her work. Besides these physical connections, I also refer to the twist in the sense Bowman defines it in relation to the roll in the opening quote of this concluding chapter. While the spinal roll at a glance might resemble the spinal twist and indeed has value compared to not doing any of the rolling or twisting movements at all, Bowman points out how the much less concentration-requiring and free roll does not apply the twisting loads to the vertebrae column that are necessary to release tension in the trunk. Throughout the work with this thesis I have, along these lines, attempted to leave the stuck position of merely rejection of Bowman’s theories without perfunctory bypassing significant layers and rolling over in complete celebration. I have strived to achieve an attentiveness that enables a release of tense structures and opens up for new perceptions with regards to a seemingly known whole.

The whole I have been concerned with here is contemporary understandings of the natural and the healthy. We live in a time, in which the natural sciences have shifted focus from bounded bodies and singled-out genes to how cells and bodies intra-act with bodily internal and external environments. Simultaneously, the feminist humanities and social sciences have, through the new materialist turn, moved into and beyond semiotic-discursive conceptualisations of corporeality. These multi-disciplinary shifts of focus have disrupted the conventional nature-culture debate and a new landscape of imaginaries on the natural and its bodily implications has emerged.

My ambition with this thesis has been to explore a section of this unmapped topography from an intersectional feminist perspective. I have done so by investigating notions of the natural and the healthy in Katy Bowman’s popularised biomechanics with a main focus on the formative categories of class and gender. Bowman’s teaching is a full-on popular science and life-style program that, on the one hand, emphasises how our everyday environment of physical loads shape our bodies, and, on the other hand, connects the natural and healthy to our pre-historical past. Her work offers an interesting entrance point to the new topography of notions of the natural and the healthy, as it draws resources from an epigenetic field that is part of the new natural science focus. Its commitment-requiring character also provides insight into how important notions of the natural is for people’s everyday lives. Finally,
Bowman’s bodily practices - her hands-on and specific techniques and exercises for correcting and restoring one’s bodily alignment – make the bodily effects of her teaching less abstract.

In my exploration of Bowman’s popularised biomechanics I have found inspiration and deployed tools from several postconventional fields drawn upon by the theoretical movement of feminist posthumanisms and posthumanities (Braidotti 2013; Åsberg 2014); that is the movement that considers the human body intrinsically interlinked with a socio-cultural-material world. In this thesis I draw on my readings of Katy Bowman’s blog and book writings, podcast talks, images and films, online interviews and courses, as well as on my own corporeal experience of following her on my journey to recover from a chronic pain condition. By examining how Bowman imagines the natural and the healthy, my hope has been to illuminate some of the mechanisms, effects, and motivations that permeate a contemporary time’s notion of the natural and the healthy.

In chapter 2, “Paleo Fictions”, I have argued that Bowman’s popularised biomechanics effectively builds support for a widespread Palaeolithic metanarrative. By means of a pervasive description of how our everyday load environments shape us down on a cellular level, Bowman helps bolster our understanding of our bodily existence as fundamentally determined by our evolutionary Past.

Moving on from this outset, I have in chapter 3, “Natural Responsibilities”, attempted at illuminating some of the implications of Bowman’s notion of the natural and the healthy. To enable this, I have first discussed Bowman’s emphasis of the lingering effects of all load environments’ impact on our bodies; presented her comprehensive techniques for restoring our bodies to a more optimal, natural, health; and, situated her work within a contemporary Western individualised health discourse. Thereafter I have examined the highly corporeal ways in which Bowman’s notion of the natural and the healthy intersects with gender and class.

My exploration of Bowman’s teaching has led me to draw the following conclusions:

- There are interesting connections between feminist and biomechanical understandings of the body as enironed. Bowman’s in-depth description of how movement habits, clothing, furniture, surfaces, etc. impose transformative mechanical input on our cellular structures overlaps with a long-term feminist emphasis of how the sociocultural and material world forms our bodies. The widespread feminist understanding of gender, class and other intersectional categories as being done through a coming together of institutional, discursive, corporeal and other material forces, has far-reaching genealogical roots in the second wave
feminism and Simone de Beauvoir’s (1953) famous statement that one is not born but becomes a woman (Åsberg, Thiele and v.d. Tuin forthcoming: 9). Similarly, phenomenologically inspired feminists rest on an implicit foundational understanding of bodies as non-bounded from each other and the environment (Shildrick 2015: 14). With contemporary new material feminist scholars like Donna Haraway, Karen Barad, Stacy Alaimo, and Elizabeth Grosz, the role of physicalities and the body in this discursive-semiotic-material exchange has become even more explicitly theorised. Biomechanics contributes to this long-term feminist understanding to think of the body as environed – especially to new materialist conceptualisations of the natural – by illustrating how our corporeal existence is in dependent relation to a penetrative, and to sociocultural aspects connected, physical load environment; that is, to an everyday environment that previously has not been brought to much attention. This opens up for new and specific explorations of how gender and class (as well as other intersectional categories) get inscribed in our bodies. With other words, biomechanics implicitly shows that our everyday load environment should be included in intersectional feminist studies.

• *Naturecultural understandings can reinforce a nature-culture dichotomy.* Perhaps most puzzling to me during the research process, and eventually the most surprising conclusion, is how Bowman’s popularised biomechanics conveys an understanding of nature as simultaneously intertwined with and separated from contemporary culture. Where material feminist understandings of the natural emphasise the non-determinist and non-essentialist character of our sociocultural-material environment’s intra-action with our bodies, Bowman distinguishes between the term environment and nature. According to Bowman, all kinds of load environments shape our bodies. The natural, however, is in her popularised biomechanics a term reserved to describe an imagined optimal environment for health; a load environment that is held to be determined by our evolutionary past.

• *Contemporary understandings of the natural and the healthy are influenced by neoliberal discourses.* Bowman’s popularised biomechanics taps into a contemporary Western individualised health discourse that depicts health as personal responsibility and choice. By regarding diseases and ailments as almost fully controllable through adoption of a right attitude and dedication to bodily self-discipline, Bowman reinforces a contemporary guilt culture where the ill person is understood as insufficiently devoted to her health (cf. Stacey 1997: 220; Rose and Novas 2002: 22). Thus, while the biomechanical science opens up for interesting possibilities to analyse how class and gender contribute to our bodily health, the power of discourse and material limitations is downplayed in Bowman’s teaching. While
addressing access to time and money as health-influencing factors, they are mostly discussed in terms of people’s made-up excuses for not attending to their health. On the one hand Bowman’s description of how gendered habits manifest themselves in our bodies have interesting overlaps with Judith Butler’s (1990) gender performativity theory. The biological sex can here be understood as just as context-dependent as and intertwined with the cultural gender. However, where Butler emphasises the strict discursive regulation that surrounds the relationship between sex and gender (and sexual desire) Bowman addresses unhealthy gendered habits as an expression of vanity and personal choice.

• The combined notion of environed bodies, nature as a past Origin, and health as individual choice produces problematic, yet partly subversive, essentialist understandings of gender. Similarly to how primatology has deployed an Orientalist matrix of dichotomies to tell a normative story about the family (Haraway 1989), Bowman’s contrasting of a destructive contemporary culture with a natural Palaeolithic past enables her to naturalise essentialist ideas of motherhood. Bowman emphasises the great impact of the early childhood years’ load environment on the ability to reach optimal health later in life. In addition to the long list of “development-crippling” (Bowman in Saint-Paul 2014) things that she argues that a child should not be exposed to, she puts a certain stress on the biomechanical importance of continuous and long-term breastfeeding. Thus, the emphasis of the responsibility for the own family – an integral part of both by the individualised health discourse and Bowman’s imagination of the natural health as pre-historically determined – imposes especially strong restrictions on women lives. Yet, Bowman’s story on the natural and the healthy as Origin also destabilises traditional masculine Western fantasies on the natural as competitive and tough by emphasising the biomechanical significance of unspectacular, continuous, everyday movements.

• Bowman’s notion of the natural and the healthy incorporates an acknowledgement of individual, collective and material agencies, which offers affirmative alternatives to an inefficient conventional health-care and a growth-focusing Western world. Besides the essentialism and downplaying of structures, Bowman’s popularised biomechanics, however, meets and takes seriously a widespread longing for a greater understanding of the own body and for influence over the treatment of one’s health condition. Her explicit description of our bodies’ viscosity, alignment and requirement for all-body movement destabilises the biomedical Cartesian understanding of non-durable bounded bodies and bodily parts, and provides effective tools for self-management of various ailments. Despite the influence of the individual health discourse, Bowman’s thorough understanding of our bodily limitations also
comes with an encouragement and engagement in collective actions to change the structures and norms of an unsustainable Western economy.

Reaching the end of this thesis, I will here connect these empirical findings to my overarching theoretical question on what they indicate in terms of a contemporary Western understanding of our human bodily relation to the environment.

Important for this discussion is, I argue, to take into account the specific, new type, of popular science that Bowman’s teaching constitutes. In a contemporary time of social media and online communities, new opportunities have emerged for popular science to make-up a more pervasive and comprehensive part of peoples lives. Instead of entertaining monthly magazines, isolated books or television shows, it is possible to produce and consume popular science in continuous and interactive flows; we can choose to live in popular science communities. This also makes room for another type of content that much more explicitly touches upon the personal lives of the consumer and requires a life-style commitment. I suggest that the popularity of Bowman’s full-on popular science and life-style program not only displays that notions of the natural and the healthy are important for people’s everyday life-choices. Her increasing audience is also, I propose, indicative of a widespread contemporary desire for devoting oneself to something pervasive.

The subject and take that this devotion concerns are, however, also specifically entrancing and illuminating. I argue that the Palaeolithic imaginary that Bowman taps into and reconfigures helps bolster our understanding of ourselves as evolutionary beings. As such it provides a story of comforting continuity, which together with the individualised health discourse and Bowman’s bodily practices offers a sense of predictability and control. Furthermore, I suggest that both the fantasy of our bodily function as determined by our Origin, and the understanding of the body as environed point at the importance for us of feeling interlinked with other existences, as well in time as in space.

To sum up, I argue that contemporary Western understandings of the natural and the healthy are influenced by a longing for self-commitment, control and connectedness.

**Now what?**

This intersectional feminist study’s focus on contemporary notions of the natural and the healthy has been the result of a brutal delimitation. During the research process I have had to exclude many aspects that, had the thesis been longer, could have contributed to a fuller
analysis. For example, it would have been interesting to explore the role ethnicity plays in Bowman’s imagining of the natural, as she when referring to a natural Origin also draws references to current living tribes in non-Western contexts. In the course of the work with this study my interest in the larger landscape of competing and intra-acting imaginaries on the natural has also increased. Rather than a completed work on the contemporary Western understanding of our bodily relation to our environment, I view this thesis as an attempt to contribute with a thread in a much bigger weave of called for analyses on the developing conceptualisations of the natural and the healthy in a world in which more and more people conceive of us as naturecultural beings.

As a next step it would thereby be interesting to both deepen this analysis of Bowman’s imaginary even more, by including more intersections, and broaden the analysis of contemporary conceptualisations on the natural, by letting Bowman’s biomechanical popular science imaginary meet other science and technology fantasies within natural science, popular science and science fiction that in various ways address the environmental influence for bodily health. This would not only further the understanding of competing and intra-acting contemporary health and lifestyle discourses, but also enable new cross-fertilising and affirmative visions of the future.

Holding on to an affirmative scope is, I believe, necessary in any work for change. The conviction of the possibility to transform our world is also what has guided me in the writing of this thesis. Inspired by Constance Penley (1997) I have, as I described in the introduction, aimed at writing as a fan. My engagement with and critique of Katy Bowman’s teaching are the engagement and critique of an admirer – I criticise, not to reject the whole, but in the hope of highlighting some problematic implications and by doing so hopefully offer transformative resistance towards oppressive aspects of a seemingly innocent conceptualisation. To engage in imaginaries is to engage in the ways things could be otherwise. Pondering upon questions on what “possible worlds … [different stories] assume and allow” (Koobak 2013: 272) can help, not only to challenge hegemonic and oppressive frameworks, but also come closer to a less violent new. Twisting, if you like.
REFERENCES

Printed sources

  _(2011d)* *Every Woman’s Guide to Foot Pain Relief: The New Science of Healthy Feet*  
  (Dallas Texas: BenBella Books).
  _(2014a)* *Move Your DNA: Restore Your Health through Natural Movement.* (USA:  
  Propriometric Press).
  _(2015a)* *Whole Body Barefoot: Transitioning Well to Minimal Footwear.* (USA:  
  Propriometric Press)
  Race the World Has Never Seen* (New York: Alfred A. Knopf)

Internet sources

Bernstein, Lenny (2014) People who bought these Vibram FiveFinger shoes may be entitled  
  to a refund. Available at: http://www.washingtonpost.com/news/to-your-  
  health/wp/2014/05/08/say-it-aint-so-vibram-say-it-aint-so/?tid=hpModule_1f58e93a- 
  8a7a-11e2-98d9-3012c1cd81e, (accessed July 28, 2015)
Bowman, Katy (n.d.-a) *Alignment Snacks* [electronic video-series] Available at:  
  _(n.d.-b)* Read this first, Katy Says: Alignment Matters. Available at:  
  _(n.d.-c)* *Let’s Do the Twist, Alignment Snack* [electronic video] (USA: Restorative  
  Exercise Institute)
  (accessed July 28, 2015)
  _(2010)* Alignment matters, Katy Says: Alignment Matters. Available at:  
  _(2011a)* *Whole Body Alignment* [electronic course/lectures] (Ventura: Restorative Exercise  
  Institute)
(2011b) Sunday kind of love, Katy Says: Alignment Matters. Available at:

(2011c) Under pressure (Part 2), Katy Says: Alignment Matters. Available at:

(2011e) Whole Body Alignment – Session 01, Part 02 [electronic lecture] (Ventura:
Restorative Exercise Institute)

(2012) Palm reader, Katy Says: Alignment Matters. Available at:

(2013) #AHS13, Katy Says: Alignment Matters. Available at:

(2014b) Forage, Katy Says: Alignment Matters. Available at:

(2014c) Paleo Parenting - Bonus Material [electronic course/lecture] (Pt. Richmond:
Restorative Exercise Institute)

Institute)

(2014e) Thinking outside the (classroom) chair, Katy Says: Alignment Matters. Available at:
http://www.katysays.com/thinking-outside-the-classroom-chair/ (accessed July 28,
2015)

(2015b) Don’t just sit there (with kids), Katy Says: Alignment Matters. Available at:

(2015c) You’re more than (2 of) your parts, Katy Says: Alignment Matters. Available at:

Bowman, Katy, and Dani Hemmat (2014a) Natural Movement, Katy Says: Alignment Matters
[electronic podcast episode] Available at:
http://www.stitcher.com/podcast/monkeyhead-freelance/katy-says/e/episode-2-natural-
movement-36779771 (accessed July 28, 2015)

(2014b) Casts, Katy Says: Alignment Matters [electronic podcast episode] Available at:
http://www.stitcher.com/podcast/monkeyhead-freelance/katy-says/e/episode-3casts-
36779632 (accessed June 28, 2015)


(2015a) Katy Bowman’s MovNat Vacation, Katy Says: Alignment Matters [electronic
podcast episode] Available at: http://www.stitcher.com/podcast/monkeyhead-

86


Lindeberg, Staffan (n.d.) About, Staffan Lindeberg’s website. Available at:

McCoid, David (n.d.) About Me, Freedom from Pelvic Pain. Available at:


MedLine Plus (n.d.) Diastasis recti, Medline Plus Medical Encyclopedia. Available at:

Movement Monkey (n.d.) About Me, Movement Monkey. Available at:

MovNat (2009-2013a) Our Approach, MovNat. Available at:


Restorative Exercise Institute (n.d.) About, Restorative Exercise Institute. Available at:

Rude, Shannon (n.d.) Shannon Rude, Purna Wellness. Available at:


Thomas, Brooke (2013) Katy Bowman Interview, Liberated Body. Available at:


Bibliography


De Beauvoir, Simone (1953) *The Second Sex* (New York: Knopf)


____(2014) *Feminist Theories and Methodologies in Intersectional and Postconstructionist Perspectives* [lecture script from lecture in the MA programme in Gender Studies – Intersectionality and Change, Department of Thematic Studies – Gender Studies, Linköping University, Year 2]. 14 September 2014.


Minh-ha, Trinh T. (1986-87) She, the Inappropriate/d Other, *Discourse* 8. (Milwaukee Wisconsin: Center for Twentieth Century Studies)


Shildrick, Margrit (1994) Leaky Bodies and Boundaries: Feminism, Deconstruction and Bioethics (phd). (University of Warwick)


Åsberg, Cecilia (2005) Genetiska föreställningar: Mellan genus och genrer i populär/vetenskaps visuella kulturer [Between gender and genes in the visual cultures of popular science] (Linköping: Tema Genus, Linköping University)


Åsberg, Cecilia; Thiele, Kathrin and van der Tuin, Iris (forthcoming) Speculative Before the Turn: Re-introducing Feminist Materialist Performativity.
### Abstract
Situated in a time of advanced technoscience and new materialist feminist humanities/social sciences, this thesis explores how popular science renditions of biomechanics contribute to transforming imaginaries about “the natural” and “healthy”. It does so by zooming in on biomechanical scientist Katy Bowman’s pervasive and life-style commitment-requiring teaching. Her books and online material conceptualise and connect a bodily dependency on adequate physical load environments to an imagined natural health of our Palaeolithic ancestors. Drawing on several postconventional fields gathered under the banner of feminist posthumanisms and posthumanities (Braidotti 2013; Åsberg 2014), this thesis demonstrates how gendered and otherwise intersectionally interpreted fantasies intra-act with Bowman’s specific bodily practices, constructing a natural with both limiting and liberating consequences. Notions of the natural in popularised biomechanics are here explored foremost with a focus on the formative categories of gender and class. More explicitly, the thesis shows how Bowman’s teaching, on the one hand, links well with theorisings of corporeal, environmental and material feminist scholars, such as Elizabeth Grosz’s (1994) and Stacy Alaimo’s (2010) notions of environed corporeality and trans-corporeality. On the other hand, though, Bowman’s popularised biomechanics simultaneously reinforces a troublesome nature-culture divide and neo-liberal discourses on health as choice. However, while downplaying sociocultural and economical factors, and underpinning essentialist notions of motherhood, Bowman’s popular science also destabilises masculine understandings of the natural as tough; acknowledges material, individual and collective agency; and, offers effective techniques for managing various health conditions – all in ways that may well be interpreted and practiced within feminist registers. Based on this example from Bowman’s popular science, the author argues that contemporary Western understandings of the natural are influenced by a longing for self-commitment, control and connectedness.

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