

FRICION INTENDED

Exploring the overlooked potential of designing for effort.

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ABSTRACT

Ease, comfort and efficiency are assumed desirables; they form the established norm of unquestioned values in commercial product design. The norm shapes our everyday. Those daily things considered mundane and commonplace, form how we go about our daily doings. How we actually live our lives. Design needs to be there to defend human interest; to approach the user differently than a passive consumer, to create space for human qualities in contemporary everyday life. I have been exploring the potential of designing for effort, and argue for its value by giving examples. I have developed a series of three products under the shared name *Friction Intended*. The proposals evoke effort of different kinds, each creating space for other alternative values.

Object A is a light concept working with reflections. Reflecting from one surface to another the light can be followed and its behavior studied. The reflective elements are tools for exploration and active learning; to actively perceive the daily phenomenon of light.

Object B is a backpack to be assembled from a large sheet of textile and a set of straps. Over time, the usage of the bag can become a personal ritual. Wearing the bag can also be a statement; how will people react when the large cloth is dramatically folded open in a public environment?

Object C is a cup with rounded base. The cup moves; never fully finding its balance it sways back and forth ever differently depending on the amount of liquid inside and the qualities of the gestures it has been handled with. The attention is drawn to the moment by giving careful attention to a simple daily ritual.

Designing for effort in everyday products creates space to design for an engaging and stimulating environment. Once deciding simple things are worth more time, strain and patience there is the opportunity to enrich those activities. Effort has the potential to create space for the development of contemporary rituals, active engagement and everyday curiosity.

The design space of the potential of effort is a rich and varied. The examples given by the *Friction Intended* series, are representatives for a field where much more potential still lays. This is a call, especially on the design field, to question the given, to challenge the norm and to reflect on its impact.

“First of all, design is about people. It is about our lives, our hopes and dreams, our loneliness and joy, our sense of beauty and justice, about the social and the good. It is about being in the world.” ¹

Kees Overbeeke

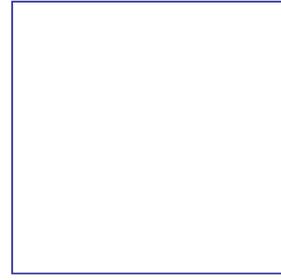
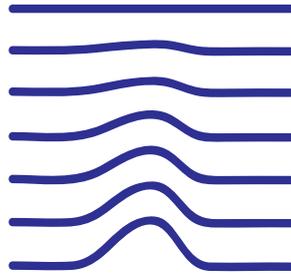
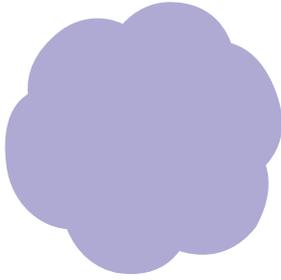
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INTRODUCTION

This project is about effort. The ease-of-use norm is challenged by exercising the questions: What if effort is a design aim? What is the overlooked potential of effort, what has been excluded because of the effort taboo?

In a designerly ways - through the development of concepts, prototypes and by placing those in everyday situations - the design space of the potential of effort is explored. Three products, under the share name *Friction Intended*, represent different areas of potential in this design space. They each aim for effort in another way and live in a variety of daily life situations. The products represent areas of potential, which means much more valuable can be found if other designers will further explore this design space. With this project, through the products, I ask questions and create tools for reflection. By using these products we can experience what the shift in values gives, and creates room to reflect on this.



THE NORM

Comfort / Ease / Efficiency

Ease-of-use, usability, user-friendliness; some of the major buzzwords used in product, service and interaction design, labelling the task of the designer as to make the interaction with design outcomes as easy, comfortable and unobtrusive as possible. The norm for ease-of-use is very strong in industrial design, it has become an assumed desirable in practically every design project. Comfort and ease have become assumed values that seem to have become such 'obvious' desirables, that they are not argued for. Instead, they are carelessly used as arguments for design decisions. Assumptions make us unaware of our decisions. I find it necessary to reflect on these made assumptions and criticize its impact. Comfort and ease are not only established norms in the design world but ubiquitously present in contemporary society. The same set of values can't possibly be most desirable in every single situation.

If our lives continuously become easier and more comfortable, will that remain to be desirable? Tendencies in society, most strongly in specific newly arising subcultures, show a reluctance towards the continuous growth of technology as part of everyday life. Not the use of technology itself but how it is used and with what mindset is what I want to question. There is an opportunity to reflect with what aim and goals we design, what values and desires to strive for. There is a responsible role for designers in society, to

reflect on and criticise contemporary phenomena.

Historian Rutger Bregman makes a plea for utopian thinking. According to Bregman we have arrived at Cockaigne, the utopian vision originating from the Middel Ages, we just haven't fully realised it.

*"[...] Worldwide there already are more people with obesity than hunger. The murder rate is forty times lower than in the Middle Ages, and for anyone with the correct passport an impressive social safety net has been rigged up. Maybe that is our biggest problem: the dream of Cockaigne is running out. A little more consumption, a little more security - it may still exist, but the drawbacks in the form of environmental pollution, obesity and Big Brother are gradually becoming a lot bigger."*²

Rutger Bregman

With an outdated utopia running out it is crucial to set new dreams, hopes and aspirations. We have to rethink our values: what do we desire now from this point. Utopias and ideals help guide us, steer our development and argue for decisions. The utopia Cockaigne is at the tipping point, or perhaps it already over the tip, of being more harmful than beneficial in steering human progress. An often made mistake; the simplistic idea that a bit more of something good is

always better, an unnecessary limitedness of common imagination. When arrived at a point where the word innovation is used for such things as to design away the effort of handling a remote control, or developing self driving cars, I would say our scope of improvement is very limited and can drive us beyond ridiculous.

The difficulty with the norm I am trying to challenge, and that being precisely why it is so important to try to challenge it, is how it is omnipresent in society. It seeped into every aspect of designed daily life and for that, became invisible and unquestioned.

“As computing has emerges from the office and laboratory, it seems to have brought along values of the workplace: concerns for clarity, efficiency and productivity.”³

Bill Gaver

Ever more technology surrounds us, it mediates communication, and guides us through increasing amounts of information. Technology often goes beyond our understanding, and takes over routine tasks, making the user increasingly passive.

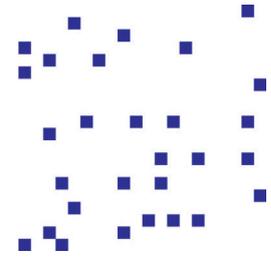
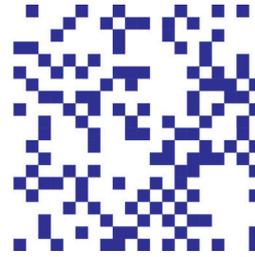
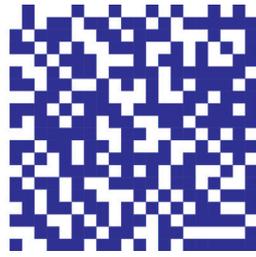
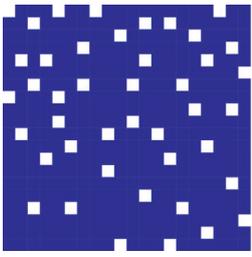
“The social, cultural, and ecological problems unleashed by these developments reveal how necessary it is to rethink our concept of use and ease. The easier something is to use, the less we think about how we are using it and the “side effects” of such use. The more perfectly a product has been designed, the less we are tempted to consider any problems posed by it or its use.”⁴

Bernd Meurer

Omnipresent ease and comfort creates problems; health problems caused by physical inactivity threaten the body as well as the mind.⁵ Also to be part of, to depend on, technologies and systems beyond comprehension, creates situations where people are unable to maintain a grip on their surroundings.

With a tunnel vision on ease, comfort and efficiency,

human action is reduced throughout everyday life. These norms have shaped our everyday. While these values originate from the workplace, the efficiency-focused approach has become completely interwoven with our daily lives including the contexts of our homes and leisure time.⁶ Efficiency requires standardisation and simplification, which means a losses in depth and diversity. Because these values are so interwoven with the everyday and the thinking in the design world, there is an important task for designers to try to open this up.



DESIGN RESPONDS

Dematerialisation / Mediation / Interaction

In current day society we are increasingly dealing with digitalization, resulting in 'dematerialization'. Entities lose their physical form for they can be represented in digital form. Main examples are money, music, and information in general. Instead of existing in physical form they float around as bits and bytes, often represented to us as pixels on screens. Now it is useful to realize that the entities dematerialized have always been representations and are now simply no longer represented in a material form; a CD is not music itself and a paper bill is only valuable because of our social agreement on its value. Yet the loss of their physical form still has quite an impact.

There where human beings and technology meet, mediation takes place through interfaces. Krippendorff defines interfaces as follows:

"Interfaces constitute an entirely new kind of artefact, a human-technological symbiosis that cannot be attended to without reference to both. For designers, a key concern is that interfaces are understandable. Users' understanding need not be 'correct' as intended by the producer, engineer or designer of the technology. It needs to go only as far as needed for users to be able to interact with that technology as naturally and effortless as possible, without causing disruptions and reasons to fear failure. User-friendliness is a popular term

that describes interactive understanding and seamless or uninterrupted use. Usability is another word for much the same interface quality." ⁷

Klaus Krippendorff

Without backing argument, simply in the description of what an interface is, it is claimed the interaction with technology should always be as seamless as possible and no deeper understanding is expected from the user, the avoidance of discomfort is a clear goal and a goal in itself. In the realm of consumer electronics and user interface design the norm of ease-of-use is most prominent and least questioned.

It is often said we are living in an increasingly complex world. Constantly interconnected with the whole world, innovative technologies interweaving with our everyday lives. It appears the common, commercial, reaction to cope with this increasing complexity is for the designer to make it as easy as possible to interact with these technologies. Although not always succeeding the mindset is commonly to design for ease of use and understanding, making it unnecessary to fully grasp the existing complexities. By doing this we create a distance towards technology. Even though interacting with various technologies on a daily basis, it is not expected of the user to fully understand them, in contrast the inner workings are often camouflaged

to avoid complexity, limiting the access for gaining insights. One of the questions I want to ask with this project is whether we could design in a way that would be more demanding, in order to create more room for sense making.

The difficulty with dealing with technology, when designing electronic devices, is that our natural sense making processes are not compatible. It is difficult to relate to them through the body.

“The problem with electronic devices is that they are not open to our actions. Our body is mechanical. We therefore need an ‘interface’ that we can touch, push. Buttons? Interaction design is about exploiting the human perceptual-motor skills.”⁸

Kees Overbeeke

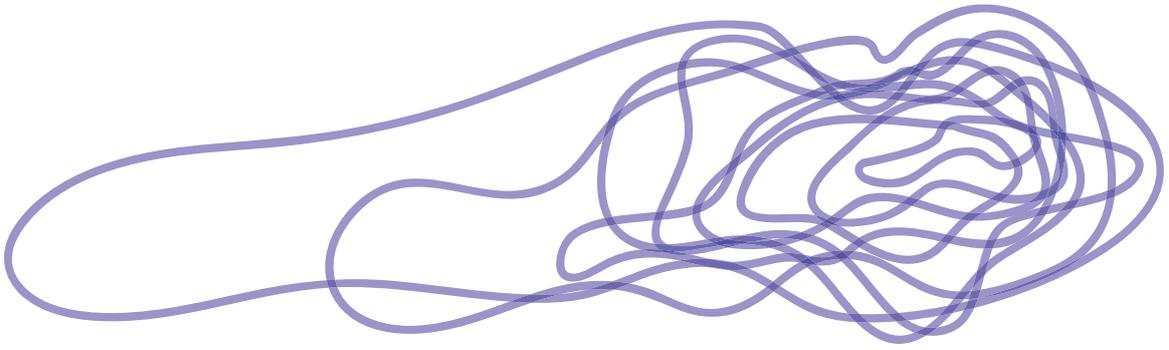
When the objects we interact with have, like us, material form, and perform, like us, according the natural laws of physical properties, there is a way for us to understand them. A mechanism can be complex but because if its mechanical properties its workings can be revealed through interaction with the object, by touching, exploring, and trying out. The trouble with electronic devices is that this does not work in the same way. Its workings exceed its physical properties and are difficult to trace back and grasp.

Aesthetic interaction is a design research field that deals with this gap, the need for translation between technology and the human body. Moving away from the aesthetics of the designed object, the full aesthetic experience of the actions in use are acknowledged. It is about realising the aesthetic potential of the experience that arises from physical movements. Breaking the mind-body dichotomy; it is about meaning creation through actual physical action, working from the concept of embodied knowledge.⁹

The design research field of aesthetic interaction has been a major influence and inspiration for this project,

especially when it talks about skilful movement, and our bodily skills to explore the world. What I often miss in the projects where these theories are applied, is a more critical stance. It is wonderful to be able to interact with technology in more strongly embodied and aesthetically richer ways. The concepts developed enrich and humanise the interaction with technology, but follow the logic of technology driven innovation. From this point of view innovation, improvement and development stands for technological opportunities.

Designers should not always follow the logic of industry, there also is a role in society for designers to be critical, provoke and raise questions. When designing critically one embodies ideas and values intentionally at odds with those of his own time.¹⁰ This project is about rethinking the everyday, by exploring the effect of changing around the hierarchy of certain values. Anthony Dunne and Fiona Raby created an A/B list starting with affirmative and problem solving on one side, and critical and problem solving on the other. By means of these lists they roughly sketch how their design is different from conventional commercial design. My project is a blend of A and B qualities, because I try to challenge norms on their own territory. The products I developed are realistic, desirable and feasible, if not for certain taboos in society and design industry.



HUMAN

Body / Mind / Action

Before I delve into my subject of exploration, the potential of designing for effort, I first want to look into the 'who' question. Who is it I am design for? Or even, if agreeing that design influences behaviour and therefore how people live their lives, who am I designing?

There is a need to defend human qualities in contemporary everyday life. So what does it mean to be human, what ought I to be defending? I want to start from the essence and look at who I am designing for; people, human beings in their full complexity. Society develops on terms of technology, economy and politics. Although those are humans creations, the most essential human qualities and needs can become repressed when they start taking the upper hand. Bill Gaver proposes an alternative approach by designing for Homo Ludens.

“The idea of Homo Ludens – humans defined as playful creatures (Huizinga, J., 1950) – is an antidote to assumptions that technology should provide clear, efficient solutions to practical problems. From this perspective, we are characterised not just by our thinking or achievements, but by our playfulness: our curiosity, our love of diversion, our explorations, inventions and wonder.”¹¹

Bill Gaver

In a classical, outdated, way of defining human beings, a separation is made between body and mind. Descartes, who is the founder of this way of thinking, defined both mind and body as entities in themselves and even as opposites from one another. The view of body and mind as dualistic entities is still very much present in western thinking, and had influence on how we shape social structures. Thinking as opposed to feeling; the intangible mind as apposed to the physical body. A very long time before Descartes, the hierarchy of these notions were in a way already established in ancient Greek, where the foundation of western philosophy was laid. Through abstraction, rhetoric thinking and the creation of logic were made possible. It was about reflecting in order to find truth and understanding. The invention of logic was, and is, highly appraised and has meant a lot for human development. In ancient Greek rhetoric thinking was the activity of the aristocrats where the physical labor was performed by slaves. It is difficult now not to think of the mind and body as dualistic entities with an inherent hierarchy, a large history of thinking has been built on this notion and it still serves as a useful tool. Several other ways of defining the human have been developed since though, where some might do more justice to the complexity and irrationality of human beings. Heidegger considered the platonic model to be backwards. According to Heidegger, that what

characterizes us as human beings is not to distance ourselves to reflect and think logically and rationally. Our most important ability, he said, is our ability to get involved in worlds and develop the skills for action in those worlds. With skills he meant not intellectual skills but very practical skills. We consider this kind of knowledge now as latent or embodied knowledge. Supposedly when having acquired those skills and while in the action one ideally would not be thinking at all.

Why is it that when we propose an alternative to an existing mindset it needs to go completely against the existing mind set? It can be hard to think outside a set structure, so it is important to break such structures down, but also to keep seeing what was valuable about it. While the separation of mind and body, placing logic on a pedestal as separated from the body, does our abilities short in my eyes; to claim our ultimate state of being it to not think at all is tipping over the balance from my perspective.

The film *Being in the world*¹², which talks about the philosophy of Heidegger as opposed to his predecessors, case studies are made to illustrate Heidegger's ideas. Examples are made in the form of a cook, a carpenter, musicians, a juggler. Heidegger talked about our ability to get involved in worlds. Those worlds are created by human beings, for instance the world of jazz. The practitioners try to give an account on what it means to embody knowledge and always react dynamically and very sensitively to different situations. Some describe the state of being completely absorbed in their skilled activity as the ultimate state of being. I think this take on what it means to be human truly adds to the rational approach proposed by Plato, but for me it does not overthrow it. I think a talented mathematician can experience this state of being in a similar way as a craftsman. Can it not be that a world of logic, for instance the world of arithmetic, is such as the world of jazz or cooking as explained in the movie? In several other cultures the mind and body are not as separated and through certain channels such as yoga these ideas are seeping into our society. Science, as we know it today, builds on logic, the workings

of the mind. It is interesting that it is science today increasingly discovering the interconnectivity of body and mind. Neuroscience is a hugely exciting field currently and it is expanding rapidly as well. New discoveries are made frequently forcing the field to step beyond its self-set boundaries. In the summer of 2012 highly esteemed neurologic journal *Lancet* published an article by the title "The pandemic of physical inactivity: global action for public health."⁵ Urging to react on the build knowledge about the interrelation between physical activity and the health of our brains.

When I say I want to design for a human being, I mean the integrated whole of mind and body that we are. When regarding notions as stimulation, knowledge creation, activity and health, we should not try to separate ourselves into two dualistic entities.

It are very elementary notions and how we consider them that reveal how we see humans. In *Action in perception* Alva Noë argues for an alternative approach for describing and analyzing visual perception. His predecessors described visual perception as a passive happening. The eyes were seen as cameras taking in the information of the world, and the actual seeing achieved through a process taking place in the brain. Noë opposes this view by stated perception to be an active engagement with the world. Seeing is an activity and should be considered more in terms we now consider our sense of touch. This relates also to phenomenology; Merleau-Ponty described vision to be a palpation of the look.

Noë states that visual perception is not just active, it is a skillful activity of the body as a whole. It requires the knowledge of the bodies perceptual-motor skills to be able to fully exercise ones visual ability.

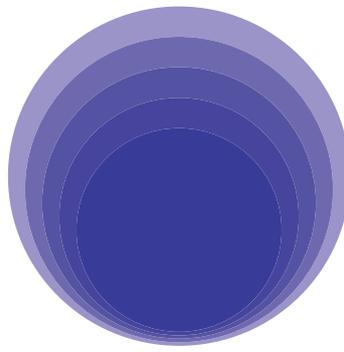
In design we know many words for those we design for such as users, customers and participants. The way I want to consider and approach the one I design for, is the human as being with its inseparable body and mind, with its ability to actively perceive, bodily engage with, and make logic sense of the world.

From the standpoint of embodied cognition, cognition as an embodied situated activity, thinking beings

should be considered first and foremost as acting beings. ¹³

“Action implies grasping, doubting, negotiating, deciding, altering, and creating. Action is tied in with interests and, as such, it is characterized by ambivalence, a propensity for conflict and ambiguity. Action is a communicative process. It takes place through motion: through intellectual motion, the motion of people, and through the motion and reshaping of knowledge, substances, things and data.” ¹⁴

Bern Meurer



GROWTH

Stimulate / Persist / Flourish

As designer I am extremely interested in how the created environment influences its inhabitants. How the tool affects the activity, how design affects the way people live their lives. Because of course it has an influence one way or another, whether you consider all its implications or not, and it is a big responsibility. To be able to create meaningful proposals it is key to start from the core, what value should the design represent and strive for? What do we value? How should we be influenced, and if we are influencing people, who are we designing? To make it even more existential, what is it that makes life worth living?

Product-, interaction-, service- and experience designers, tend to aim for positive experiences. The focus is commonly most strongly on the moment of use, the actual interaction, of whatever that is being designed. The focus is therefore usually less on the long term effects of our design proposals, on both person and society. Not just our time scope seems limited also the depth of peoples lives seems underestimated.

What I aim for, what I think we should aim for, is for people to be happy, healthy, and continuously developing. Which are absolutely not three separate things but completely interconnected. Perhaps this can be summarized by the term flourishing. Flourishing is

about human's optimal functioning, living to one's full potential, and also about having a sense of meaning, engagement, interest, and purpose in life.¹⁵ Initially I reflect on the impact design can have on individuals, but I do strongly believe that flourishing individuals form flourishing communities because we are inherently social beings.

So how can we design for people to flourish, it seems a rather large design challenge. We need to pinpoint more specific characteristics and aims. Marc Hassenzahl argues for the design of positive experiences, but on a deeper level by taking into account peoples psychological needs. These needs are considered universally of relevance, but of course the idea of a desirable life is very personal, which is why he proposes the concept of subjective well-being.

“The question is not whether positivity is to be considered; the question is where the positivity stems from. We argue that it is actually the fulfillment (or frustration) of psychological needs that renders an experience positive (or negative) and personally significant, that is, meaningful.”¹⁶
Marc Hassenzahl

The needs relevant for experience design as Hassenzahl proposes are Autonomy, Competence,

Relatedness, Popularity, Stimulation and Security.¹⁷

The three needs I relate to the subject of my focus, effort, are described as following:

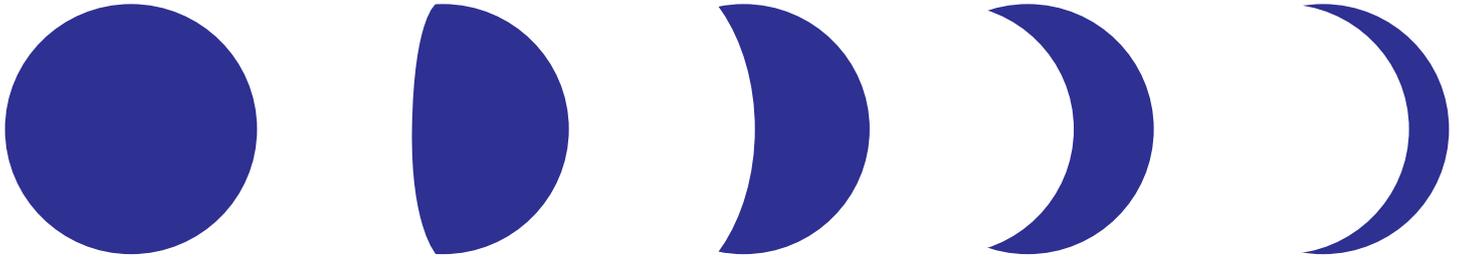
“Autonomy: Feeling that you are the cause of your own actions rather than feeling that external forces or pressure are the cause of your action. Competence: Feeling that you are very capable and effective in your actions rather than feeling incompetent or ineffective. Stimulation: Feeling that you get plenty of enjoyment and pleasure rather than feeling bored and understimulated by life.”¹⁸

Pieter Desmet proposes a framework for positive design, an approach to design for human flourishing.

“Life is more than a problem to be solved and users are more than vessels of unfulfilled needs. Besides their needs and problems, people have values, virtues, personal strengths and talents; they can develop their skills, experience hope, show gratitude, be optimistic, and live full lives. [...]

The intention is not to design so that people always feel good and never feel bad. Instead, it is to design such that people have a chance to embrace all the dimensions fo life, including hardship, adversity, and opportunity.”¹⁹

When designing for human flourishing we can not only look at, and design for, positive emotions. When intending to design for long-term wellbeing we have to take people and the depth of their lives seriously. Effort, struggle, friction, are uncomfortable experiences, with the potential to enrich peoples lives.



EVERYDAY

Mundane / Daily / Life

“Designers cannot claim the everyday because as soon as they pull near to it, it evaporates. It is, as its name indicates, a temporal category. Everyday practices are aleatory and fugitive. They resist codification because their heterogeneity is both meaningless in its particular and distorted when we abstract or generalize it. [...] One person’s everyday is irrelevant and everybody’s everyday is unimaginable.”²⁰

Jamer Hunt

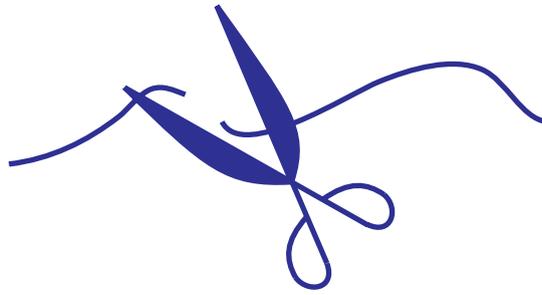
The context I decided to work with is ‘the everyday’, the daily life situated in contemporary society. Everyday life is ungraspable territory. Where one single person’s daily life may not be relevant, when abstracting the everyday to a more general sense the essence of it is lost. But so is design, design is everywhere. From the city plan of your neighborhood, to the new app on your phone, your favorite T-shirt and the local grocery delivery service. Design is omnipresent in everyday life, yet we can never design the everyday nor get a strong grip on it.

When you look up the meaning of the word mundane you can find a definition such as “lacking interest or excitement, dull”. Among its synonyms I found unexciting, uninteresting, uninvolving, routine, ordinary, everyday, day-to-day, commonplace. Here lies perhaps the core of my hook to design. How can it

be we experience something as mundane? Is it purely because we encounter an object, a phenomenon or a system on a daily basis that make us unable to have it amaze us? On so many different levels everything we consider mundane is actually quite amazing, yet it seems our way to deal with the world to stop actively noticing. That is why those phenomena that are omnipresent become invisible. When we discuss the news we report irregularities to the regular routine. When we perceive with our senses we perceive dynamically, it is the comparison of one thing from the other that we are able to perceive. When changes are too gradual, and present everywhere, it is hard for us to realize its existence. We need something to compare with, so we can take distance and take note. This is precisely what is happening with the infiltration of usability in every aspect of our daily lives. With good reason we design with the intent for products to be easy to use, but over time the ideas on usability have had such a strong influence on the creation of our everyday surroundings that it is difficult to realize it could be otherwise.

In relation to the everyday I would like to reflect on the concepts of innovation and progress. In current society people are approached by industry as consumers. What is offered by industry are innovations claiming to improve people’s lives by making things more easy, for

instance more easily accessible. Or, especially when it is about those things considered mundane, to get tasks done as efficiently as possible. With the idea to make room for more meaningful time spending, it is the everyday tasks that are to get over with fast and without a strain. But is that time really filled more meaningful, or do we just end up spending our time with a higher amount of effectively simplified, flattened out, interactions? In this project I am exploring what would happen if these notions are opposed; what if effort is a design aim. To increase focus on these mundane activities instead of simplifying them, to make them worth the effort and worth your attentiveness. With this opposition I do not intent to overthrow the existing norm, but to expose it and showcase what has been excluded by it.



TOOLS

Extending / Excluding / to Grasp

“[...] Pleasure comes before understanding, and engagement before clarity. Designing for Homo Ludens requires a new focus that seeks intrigue and delight at all levels of design, from the aesthetics of form and interaction, to functionality, to conceptual implications at psychological, social and cultural levels.”²¹

Bill Gaver

I propose to design for activity over passivity, to design tools for action and sense making. In order to connect and make sense of things one needs to be actively and consciously present, directly interacting with the surrounding. Physical interaction with the world is our ability to make sense of it. To probe, to try, to compare; we need to engage in order to develop insight. This direct approach is action based, to actively create an own expression, instead of the semantic approach which is based on existing knowledge, recognition.²²

We human beings are a creative and inventive kind. We create tools and develop the required skills to master them, extending our ability to engage in the world. Tools are everywhere around us. A tool is anything that plays a role in an activity without being consumed in the process. Tools are around us all the time, supporting our everyday activities. But when is a tool not merely supporting human activity, and taking

over human tasks? Could design, instead of creating comfort and detachment, create tools for 'grasping'?

“To say that we ‘grasp something’ implies physically that we reach for it. In the familiar physical gesture of grasping a glass, the hand will assume a rounded shape, suitable for cupping the glass, before it actually touches the surface. The body is ready to hold before it knows whether what it will hold is freezing cold or boiling hot. The technical name for the movements in which the body anticipates and acts in advance of sense data is prehension. Mentally, we ‘grasp something’ when we understand the concept, say, of an equation like $a / d = b + c$ rather than simply perform the operations [...]”²³

Richard Sennett

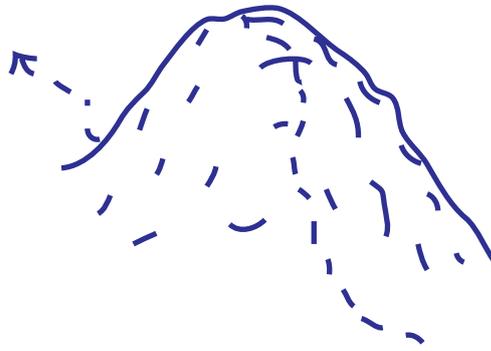
The way in which the everyday surrounding is designed affects behavior and thinking. The objects we surround ourselves with have an influence, an impact, on how we go about our daily doings. When seeing design this way it is clearly a great responsibility to design for seemingly unexciting activities. I think the extended impact of designing for requirements such as durability, ease of use, safety, comfort, recognizability, are insufficiently reflected upon. Design should strive for people to flourish: to be happy, healthy and

able people. Therefore human development, ability, awareness, competence and insight need to be prioritised in the design process.

Throughout my development as designer I have grown interest in stimulating the user, evoking the senses, action, and thought. I am not alone in the design field to work towards such qualities, but to what extent it is possible to play with these aims is framed by the taboo for effort.

To impose effort on the user; to design products demanding time, strain, struggle, friction, figuring out, is considered undesirable and commercially unviable.

If we want to open up the design field for these beautiful values and characteristics such as the stimulation of curiosity, autonomous action and competence development; we need to deal with their inseparable shadow sides. We need to open up for the aspects with more negative connotations such as risk, failure and effort. Anyone who has developed a skill of any kind, and gained the experience of autonomy and competence in it, knows it always does take risk, failure and effort to make such a journey. Do we allow to stumble and look ridiculous, take a risk and fail, in a context where all tools are designed for smooth and effortless use? Can we be open for effort if it does not seem necessary from a short term perspective?



EFFORT

Friction / Struggle / Gain

When a fellow designer inquires me about my project, and I say I am designing for effort: intentionally designing products that are more demanding than common and necessary, some laughs usually escape as a first reaction. Designing for effort is a taboo, and seems to go right against what a commercial product designer is supposed to be doing. But what is effort exactly, what do I mean with it? Effort is primarily a personal experience; a person, context and time dependent feeling. Making an effort creates a feeling of strain, it is an uncomfortable episode of an action, a resistance to be struggled through. Not only personal, the experience is fleeting as well because as soon as the reward seems to weigh up to the made effort, effort is not always identified as such anymore.

Whichever your abilities or expertise are, effort is when you push slightly into discomfort by taking a step further than what is obvious, just within reach and known to you.

The main shift I am proposing is considering the intent of designing for effort. Looking at the ways effort could be an enriching contribution to a design project, instead of an evil to be avoided. There is a huge difference in intended and unintended friction in interaction with products. When product are intended to be easy to use yet cause confusion feelings of frustration are likely to arise. This is what I call

meaningless or unintended effort; as opposed to effort that is able to be rewarding and meaningful.

I see myself as a scout who has been exploring this territory, the design space of designing for effort, and who has now returned to report on its areas of potential. In this project I argue by example, meaning that the three products I developed are the main representatives of my thoughts and findings. Additionally I have also been mapping out the design space for initial guidance, and developed a series of symbol cards that serve as a tool for brainstorming on increased effort in a particular design project.

When designing for effort there always is an aspect of time at play, it is about deciding that something is worth time. Also, you need to be aware of the situation from a social point of view; people may consider something to be worth their effort, but they will be less willing to imply effort on others, especially if it does not seem practically necessary.

There are various kinds of effort and they have potential in their own ways. Effort is a commitment, a way of viewing the world, to live in curiosity, to challenge oneself, to persist.

Effort can relate to physical movement. Our daily lives

are successfully designed increasingly comfortable, minimizing the need for physical exercise in mundane activities. This is in a way irrational behavior, for we know the health benefits of being physically active throughout the day. This by the way is also true for the health of our brains.⁵ Designing for effort could be to focus on activating the full body, straining and exercising the body, but it can also be about evoking movements with certain qualities, or aiming to enrich the scope of gestures when interacting with a product. The pushing of buttons and sliding over touch screens is limited in relation to the human body in various ways, so there are various ways to enrich that interaction for instance. Throughout the project I worked with several concepts aiming to broaden the scope of bodily effort. The idea here was to design to evoke expressive movement, way of moving fitting the human body. For instance I developed the idea of a closet that requires a forceful rotation for the shoulders to open it; or another cabinet that aimed at activating the full diagonal of the body. The movements you design for can also be very intricate and small, in order to get someone really involved in the handling. The unstable cups I made, Friction Intended: Object C, provoke, with their fragile and unstable character, gestures with certain qualities like caution, precision, attentiveness and elegance.

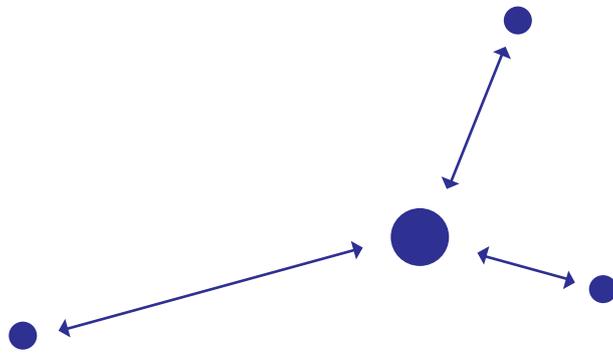
Effort can also be a mental performance. To study, to puzzle, to try to figure out, to discover and to lay connections. The friction experienced when something is unclear, and not understood, to push through this and try to understand. Once one can accept to spend time with something beyond the most efficient, endless opportunities open up. The light concept I developed, Fiction Intended: Object A, mainly focuses on this kind of effort although there also is a clear physical effort present. The light is design as such to offer tools for exploring, analyzing, learning about light and its behavior. To design for effort in this way, is to design for curiosity and open-ended sense making.

Making an effort can also be about taking risks, challenging, gaining in independence and simply

explore. How difficult it can be now to genuinely get lost in the human build environment. Bill Gaver gives a wonderful example with the (De)tour Guide²⁴, which supports people in getting lost for a predetermined amount of time. Detouring can have a huge impact on the way the surrounding is perceived, with what alertness and clarity sensorial nuances are absorbed and the imagination is triggered.

To design for effort can also mean to embrace grooming, the caring for products. Or extending actions that can grow into rituals. Giving room to build up relationships with the things around us. We can still find these qualities in traditional products made from natural materials, such as leather and wood that need to be maintained and that develop their aesthetic qualities over time.

Although effort is most clearly opposed to ease and comfort, it is also about challenging the norm of striving for efficiency. Designing for effort is to design for people as beings that are constantly learning and developing. It is to expect that what is good and worthwhile does not always come easy. Designing for effort in daily life is to respect the simple things, to be open to experience it in all its nuances. Making an effort is facing a struggle, excepting a stumble, giving it a try.



POSITION

Critique / Explore / Propose

The main aim of this project is to open up this closed off design space, the be able to design effort and to explore the potential it has. I want to make this space accessible for myself and other designs to explore, and to facilitate a discussion in order for more people both in and outside the industry to become aware of the norm and its impact.

I worked in an explorative way and throughout the project always worked with several concepts. The initial idea was to end up with around six concepts that would function as an encyclopedic range, a way to gain insight into the thoughts and findings from the project. With encyclopedic I mean a range of well considered diversity, where each design touches upon a slightly different aspect and takes on an approach accordingly. This enables the demonstration of the full range of findings and insights without forcing to simplify the project by stating one conclusive answer. This approach emphasizes the overall mindset over the specific design outcomes, and is a way to approach the temporal context of the everyday. With this way of working it is not the concepts but the relationship between them that forms the core of the project. This way of working is based on a design research method proposed by Johan Redström; Exemplary design research.²⁵

The approach I took in this project lends in ways of

working from several design research methods. How to explore an area, how to work with probing and how to argue for decisions. On the other hand the project has had a strong discursive intention, where critical and speculative designers were inspiring. And than it also became important that the design proposals were somehow convincing as commercial proposals. All this makes this project difficult to place in a specific field of design. In a way dutch designers such as from Droog work on similar territory; where society critical design projects are commercially designed. The project can be read and approached from different perspectives, this way I hope designers of different specialities can see a relation to their way of working and thinking.

At the start of this project I thought I would end up with speculative, fictional, products. Products that illustrate an alternative world based on an alternative mindset and hierarchy of values. These designs would together give an insight in how our everyday life would be if effort had a more positive connotation and was purposely designed for. Along the way though, I discovered such potential in this focus on effort, that I wanted to convincingly illustrate its desirability in current daily life. There are genuine needs for qualities and values that currently are not given space because of the dominating norms. Discovering this realistic potential influenced my design decisions strongly.

I still wanted to provoke, I think it is important to make this topic subject of discussion. Yet I now also wanted to contribute by making genuine proposals. The aim transformed from exploring and provoking, to provoking and proposing.

It became clear that all nuances - what kind of effort, how it is evoked, in what situation, through what means, how subtle - were crucial in order to balance desirable and demanding qualities. That is also why, except for initial talks, explorations and tryouts, the concept where developed as soon as possible to reach a convincing level for trying out. Working so practical and being able to try prototypes throughout the project works well for me and was very suitable for this project. Especially the probing of the first ceramic cups that were prototyped gave for rich insights about the cup concept itself, as well as the implications of designing for effort in a more general sense.

Because I am exploring the potential of effort, and am arguing for it by giving examples, the concepts have been chosen accordingly. Not only were the different concepts supposed to offer a possibly desirable scenario, it had to be examples of mundane products where the level of effort had clearly been increased. Also they were to represent different kinds of effort and placed in a variety of daily life situations, so together they could represent to full scope of potential. The cups are influencing a social situation, while the backpack is more of an individual statement. The light concept provokes the effort of laying connections and developing an abstract understanding, while the cups more clearly steer the qualities of the gestures when interaction with them.

With this project I aim to challenge the norm; if anything I hope to make some designers realize the existence of the norm and therefor consider its impact. To clearly make a point and boldly make a statement I could have decided to push the effort in products to an extreme, or I could have done the opposite and find a way to pinpoint the absence of effort in our everyday activities

and provoke by extrapolating the effect it has on our abilities and experiences. What I have decided to do is neither of those and is based on the idea that I want to provoke in order for people to open up their mind, yet without falling into an attitude that is purely negative. It is important to criticize the norm, but possibly even more constructive when trying to propose an alternative.

CONCLUSION

Designing for effort in everyday products creates space to design for an engaging and stimulating environment. Once deciding simple things are worth more time, strain and patience there is the opportunity to enrich those activities. Designing for effort is a means to create products that evoke people to be more attentive of everyday phenomena, to perform a richer variety of bodily activities, to be more adventurous and to develop contemporary rituals. When embracing effort as a quality, design can aim to stimulate people and give them tools to grow and flourish. The design space of the potential of effort is rich and varied. The examples given by the Friction Intended series, are representatives for a field where much more potential still lays. This is a call, especially on the design field, to question the given, to challenge the norm and reflect on its impact.

REFERENCES

- 1 Overbeeke, C 2007, 'The aesthetics of the impossible', Inaugural lecture at Technical University Eindhoven, p.4
- 2 Bregman, R 2013, 'Waar blijft luilekkerland', De Correspondent, viewed 23 March 2014, <<https://decorrespondent.nl/121/waar-blijft-luilekkerland/4651845-d68f7e68>>.
- 3 Gaver, W 2009, 'Designing for Homo Ludens', Still, in (Re)searching the Digital Bauhaus, Binder, T., Löwgren, J., and Malmberg, L. (eds.). London: Springer, pp. 163-178.
- 4 Meurer, B 2001, 'The transformation of Design', Design Issues, Vol. 17, No. 1 (Winter, 2001), p.44-53
- 5 Harold W Kohl 3rd, Cora Lynn Craig, Estelle Victoria Lambert, Shigeru Inoue, Jasem Ramadan Alkandari, Grit Leetongin, Sonja Kahlmeier, for the Lancet Physical Activity Series Working Group 2012, 'The pandemic of physical inactivity: global action for public health', Lancet, Vol. 380, p.294-305
- 6 Djajadiningrat, T, Matthews, B, Stienstra, M 2007, 'Easy doesn't do it: Skill and expression in tangible aesthetics', Personal and Ubiquitous Computing, Vol.11, Issue 8, p.657-676
- 7 Krippendorff, K 2006, The Semantic Turn; A New Foundation for Design, Boca Raton, London, New York: Taylor&Francis, CRC Press.
- 8 Overbeeke, C 2007, 'The aesthetics of the impossible', Inaugural lecture at Technical University Eindhoven, p.6
- 9 Djajadiningrat, T, Matthews, B, Stienstra, M 2007, 'Easy doesn't do it: Skill and expression in tangible aesthetics', Personal and Ubiquitous Computing, Vol.11, Issue 8, p.657-676
- 10 Dunne, A & Raby, F 2013, Speculative Everything, The MIT press, p.17
- 11 Gaver, W 2009, 'Designing for Homo Ludens', Still, in (Re)searching the Digital Bauhaus, Binder, T., Löwgren, J., and Malmberg, L. (eds.). London: Springer, pp. 163-178.
- 12 Being in the World (documentary film), 2010, Tao Ruspoli, United States
- 13 Anderson, M 2003, 'Embodied Cognition: A field guide', Artificial Intelligence, Vol. 149, p.91-103
- 14 Meurer, B 2001, 'The transformation of Design', Design Issues, Vol. 17, No. 1 (Winter, 2001), p.44-53

- 15 Desmet, P & Pohlmeier, A 2013, 'Positive design: An introduction to design for subjective well-being.', *International Journal of Design*, Vol. 7, No. 3, p.5-19
- 16/17/18 Hassenzahl, M, Eckoldt, K, Diefenbach, S, Laschke, M., Lenz, E, & Kim, J 2013, 'Designing moments of meaning and pleasure. Experience design and happiness', *International Journal of Design*, Vol. 7, p.21-31
- 19 Desmet, P & Pohlmeier, A 2013, 'Positive design: An introduction to design for subjective well-being.', *International Journal of Design*, Vol. 7, No. 3, p.5-19
- 20 Blauvelt, A 2003, *Strangely familiar: Design and everyday life*, Minneapolis, MN: Walker Art Center
- 21 Gaver, W 2009, 'Designing for Homo Ludens', Still, in (Re)searching the Digital Bauhaus, Binder, T., Löwgren, J., and Malmberg, L. (eds.). London: Springer, pp. 163-178.
- 22 Koskinen, I, Zimmerman, J, Binder, T, Redström, J & Wensveen, S 2011, *Design Research Through Practice: From the Lab, Field, and Showroom*, Waltham, MA: Morgan Kaufmann.
- 23 Sennet, R 2008, *The craftsman*, England: Clays Ltd, St Ives Plc.
- 24 Gaver, W 2009, 'Designing for Homo Ludens', Still, in (Re)searching the Digital Bauhaus, Binder, T., Löwgren, J., and Malmberg, L. (eds.). London: Springer, pp. 163-178.
- 25 Binder, T & Redström J 2006, 'Exemplary Design Research', Paper presented at the DRS wonder ground conference, November 1-4, 2006