CARRY A LIFE

-an exploration of how the act of carrying affects the expression of wearing

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Abstract

Interested by the relation of function and fashion expression, this project choose ‘carry’ as an example function to dive in. It explores how ‘carry’ affects the expression of wearing and how it can be interpret into fashion expression. The research question - what do we carry in life - gives the foundation in the developing of an aesthetic for sustaining.

Problem solving was the methodology that I adopted from Industrial design. Together with other methods, it helped me in design rationale. During the exploration, ‘carry’ is analyzed, decomposed and translated into a conceptual collection. The interpretation of ‘carry’ is not functional oriented or literal-symbol inspired. The dynamic moment of functioning is more of the focus rather than a static expression of garment. In addition, minimized fashion expression is also discussed as the aesthetic of sustainability.

Keywords

carry, function, the relation of function and fashion, problem solving, functional expression, the expression of wearing, interaction, minimalism, the aesthetic for sustainability
I. Background

A. The Relation of Function and Fashion

When put function together with fashion, it is not always clear how they are bonded. They seem to have a complicated relationship.

Function and fashion expression are two words that seems belonged to different world. The former refers to practice, technology and science. The latter are pointed to glammers, front stage and trend. These two are born to be different and serve for different purpose. Garments in the beginning were designed to meet the real, and later developed the not-so-real perceived needs of the individual person. What this means is that garments functions are to offer warmth, protection, support and comfort, as well as the not-so-real need to be stylish from a fashion perspective [1]. To fashion designers, the fashionable part of garments is where inspirations lay, whilst the functional part is more considered as restriction or frame.

If we draw a domain pointing to fashion (I.01 illustration), what is on the opposite direction? To be literally precise, it should be called ‘unfashion’. It may mean out of date, anti-fashion and more of the kind. Having two points on the domain, locate the daily apparel, whilst divides the left and right points on the domain into obvious groups: less-fashion apparel to the left and highly fashion impacted apparel to the right. The relation of function and fashion expression can be seen like two plied layers. The four points represent respectively from left to right: A - little function and fashion appearance, B - high in both functionality and fashionability, C - highly fashionable with little function, and D - highly functional with little fashion expression. A good presenter for point D could be military apparels; and a red-carpet dress could locate around point C. Draw a perpendicular line through any point along the domain, the ratio of functionality in fashion can be seen.

I.01 illustration: fashion-and-function relation

Every design need a balance of function and fashion expression. The balance various in different design fields.

Take camouflage as an example. Camouflage pattern and khaki colour stand for military style. Image I.03 is a design for military use. The design is highly functionable and looks proficiency. These functional wears are well equipped into details and extreme conditions, are less or even not at all cared by trend, because it is not designed for massive. Proficient look and good functionality are the highest aim. Right next to it (I.04) is a military replica on a weekend market. The military inspired lifestyle is attractive to many people. They wear replicas to enjoy the courage it brings, the hard-core character and care-free lifestyle.

I.03/04 image: functional wear designed for military use and replica
Moreover, function inspired lifestyle has its tentacles deeper into fashion. The two images following bring camouflage to high fashion. Nike AF1 Digi-camo (I.05) is a rebel in camouflage which carries on the camou-inspired lifestyle in street wear. Comparing to Nike AF1, Patrik Ervell’s silk camouflage pajama shirt has little to do with military style, but more for the purpose of coolness (I.06).
B. The Value of Function in Expression

How does function bring value to fashion? The basic function of garments ensures the ground value, such as protection and coverage. Theoretically, beyond the basic function, the more function (or the higher the function level) a garment has, the more valuable it is. Give an example. A water repellent jacket values more than one not water repellent function. The expression of function can also raise the garment’s value.

‘Functional clothing by definition is user-requirement specific and designed or engineered to meet the performance requirements of the user under extreme-conditions [2].’ It means special wears designed to support specific occasion, i.e. medical and military purpose.

An often heard functional wear is sportwear. Apparently, sportwear originally describes clothes specifically for sport. The expression of sportwear looks are often connected with ergonomic cut lines, bright colour blocks, stretchy/comfortable fabrics, light weight, body curve fit, etc. The images below (I.07/08) give you a clear view. On the left, stretchy fabric is cut and sewed in along ergonomic body curves; to the right, Nike Air Max is unmistakably showing off their sporty passion with bunch of colours.

In comparison, there is another sportwear expression which bears functional aesthetic. ‘Functional aesthetics describes the concept of merging a fashionable technology object deemed aesthetically pleasant with technically enhanced functionalities [3].’ It gives warship to the application of function and any traces which displays the application. Functional aesthetic is to boost product proficiency and the confidence of wearer. X-bionic’s leg energy accumulator is typical functional aesthetic. Graphic on knee, for instance, illustrates the hidden technical function in order to convince consumers.

I-09 image: X-bionic leg energy accumulator

I.07/08 image: functional expression in sportwear
Taking sport wear as example and comparing to functional expression, functional aesthetic guided sports wear appears to be function-detail highlighted. X-bionic (I.09) is a brand of this kind. The leg energy accumulator, the image below, shows a simple design with clear functional patches at knees and calves. The designer deliberately chose the graphic that reminds of muscle texture. And the clear position and specific graphic form of the two contrast patches give the signal that they are precisely allocated and shaped. The extreme pursuit of functional details distinguish functional aesthetic from other design aesthetics.

There is no doubt that the appearance of function specifies product purpose and add price value. However, it give a feeling that function is added after an existing style. Can it be the only way for function to affect style? Can function inspires fashion?

Let’s have a look at functional expression in fashion design. Take Martin Margiela’s collection Couture Complexity (AW2011) as example (I.10). From left to right, the expression transits from functional look, to deconstructed functional look, to deconstructed stylish look, and to minimalist look. The appearance of complex functional look jacket in a fashion collection gives the contrast expression. The functional expression is emphasized by contrast colour blocks and trims (adjusting draw cord, buckled belt, highlight zips). What follows is a deconstructed sport jacket blended with fashionable leather jacket. The stroke of deconstruction is deliberately obvious. Even though deconstructed, look two and three keep the shape as jacket, so that the two contrast elements integrate as one piece of garment. The disappearance of bright colour blocks and trims highlight disappears from the third outfit. Instead, the leather jacket looks cool and fashionable. Black leather is a classic element in fashion. The fourth outfit is extremely simplified. It keeps nothing but the essence of function and fashion: coated wide zip stands for function, and the billowy floaty skirt reflects fashion.

What type of expression do the four outfits shows? Would I say they are functional expression because the use of functional elements? Or say they are fashion expression because they are not comparatively functional? I would not call them functional expression, because if a design decision is not made functional-oriented, then it is most likely expression-oriented.

The first and fourth outfits are the two most impressive outfits. Comparing to each other, the first seems to be more functional, whilst the fourth is more fashionable. Both are function-expressive fashion outfits. The first appears to be more ready-to-wear. The other is a conceptual fashion outfit, which challenges garment definition.

Martin Margiela’s creative world often builds on function inspired fashion. More examples of his work will be discussed.
I.10 image: Martin Margiela’s, Couture Complexity (2011)
C. The Example Function - Carry

The complex philosophical relationship of the two interests me to research further. The concept is inevitably challenged by the frame of the term - ‘function’. It is a broad meaning and contains countless types of functions and each features vastly different properties. The incomparability between types of function makes it impossible to continue my research, unless the frame of function is narrowed down. Therefore, an example function is defined.

‘Carry’, one of the functions that is commonly seen in fashion and is often viewed as an important function. Carry, noun, ‘an act of lifting, and transporting something from one place to another’ [4]. The carrying function seems trivial in garment design. Yet it is so important we all might remember the moment trying on a jacket in a store and checking out fitting with hands in pockets.

Methods of carry

Carry as accessory is easily understood as bags. ‘Bag’ is a flexible container made of cloth, paper, plastic etc. It has a hyponym: bindle, and synonyms: poke (obsolete), sack, tote, etc.[5]. There are hundreds types of bags: suitcase, handbag, holdall, backpack, clutch, tote, ... etc. Some are for general use, some are designed for specific activity. For example, a briefcase is for documents, a purse is for card-key-and-mobile, a satchel is for books, a suitcase is for travel in distance. The more specifically the activity is defined, the bag is more effectively designed and consequently more efficient. Bag design also have various aesthetics, the same as other functional design mentioned earlier this chapter: functional aesthetic and lifestyle inspired design.

On the other hand, ‘carry’ in garments most commonly exists in form of pocket. A ‘pocket’ is a bag- or envelope-like receptacle either fastened to or inserted in an article of clothing to hold items. Pockets may also be attached to luggage, backpacks, and similar items. In older usage, a pocket was a separate small bag or pouch [6]. In European clothing pockets began by being hung like purses from a belt, which could be concealed beneath a coat or jerkin, and reach through a slit in the outer garment. The word ‘pocket’ derives from Old French ‘poke’ and appears in Middle English [7]. Patched pocket, flap pocket, and weld pocket are the most common types (I.11). Pocket outlines are most commonly composed with straight lines. Though certain pockets, i.e. trousers side pocket, are in streamline, they are simplified, minimized, or compromised as viable details.
D. ‘Carry’ Expression in Fashion Design

‘Carry’ in functional technology has to be Hussein Chalayan’s work ‘Afterwords’ (2000). The remarkable work features a room furnished with four chairs and a coffee table which are transformed into a collection of 5 outfits. Four models took off armchair covers and turned them into dresses (I.12-A). The chairs are folded into baggages and carried by the four models (I.12-B). The last outfit turned out to be the round table which transformed into a wooden skirt (I.12-B). The functionality of carry is integrated into the garments which appear fashionable. There is not much functional appearance except during the transforming.

High-tech fashion designer, Hussein Chalayan, considers technology as ‘it presents a fresh means of expression’ and ‘create(s) new ways of looking’. According to him, technology is a design language “that allow(s) you to go beyond consideration of the body or ‘normal’ clothing” [8].

‘Afterwords’ realizes carry action. The table, armchairs and chair cases are literally carried. But it does not look ‘carrying’ in the photo I.12. Despite the carried suitcases, all the outfits look perfectly normal fashion outfits. Even the transformed wooden skirt, which carries the weight of table, appears to be irrelevant to carry expression. Without any hint, it’d be hard to guess the connection with carry. Why to design the function hidden? It is as Hussain himself explained that he used technology to increase possibilities of fashion. Instead of showing off the function that technology brings, the expression of fashion expression was his goal to achieve. The function becomes a concealed background story. The story is “intended as a comment on war and the plight of refugees who suddenly have to carry all their belongings with them [9]”. It serves as motivation, inspiration and criteria of success.
Hoiming’s work 'Big Pocket' (I.13) chooses to present carry function in the marriage of leather jacket and handbag which are bridged by their common features. The borrowing of strong symbols from jackets and bags gives a clear concept. ‘Carry’ can be read from the way they are presented: shoulders carry bags; pockets carry hands. The resemblance of jacket is presented in half. In addition, the features of bags - volume and defined bottom indicate the carry function.

The ‘Big Pocket’ successfully married bike jacket and bag into a fashionable accessory. Fashionable wearables are ‘designed’ garments, accessories, or jewelry that combine aesthetics and style with functional technology [10]. It is defined to be a bag design, because, first of all, they no longer have the basic function of garments. Compare it with above mentioned Martin Margiela’s Couture Complexity (I.10). The last outfit of Martin Margiela’s work also loses basic function of garment to certain extent, but still function. The strap round neck looking like suspender carries the skirt.

What makes the difference in defining a work is garment or accessory? First, details features it; second, the scale indicates it; third, the function defines it. ‘Big Pocket’ features bag details i.e. volume, defined bottom and zip opening. It is in the size of handbag. Most importantly, it gives up protection and coverage but can carry items.

I.13 image: ‘Big Pocket’ by Hoiming
Agnė Kuzmickaitė’s ‘Paper Bag’ collection is brought up in comparison. ‘Paper Bag’ is inspired by certain type of carry product - paper bag. (I.14) Paper Bag appears more similarities to the inspiration - paper bags. It repetitively uses paper bag symbols: the folded handle, bottom folding line, straight lines and tunic silhouette, as well as the big pockets on chest and back. However resembling it is to a bag, it is clearly a garment, because it misses the defined bottom feature which is a vital formation of bag. The lack of capacity is also a reason. On the other hand, the work is in body scale and in shape of a short shirt dress. Thus it is clear to be identified as paper bag inspired garment design.

Martin Margiella’s work (I.15) repeated his way of bridging fashion and function. The highlighted feature - the pocket or handbag, is integrated into the outfit. The shape of the outfit is strictly controlled but feels soft, billowy, dynamic and simplified. The pocket/handbag is the only feature and it is pin pointed at the specific position of body where it feels that: it has to be there. The ‘carry’ here is an solution to balance the minimalism outfit.
His another work is S/S2013 (I.16) clearly displays oven-mitten proportioned pocket, so that they are able to break the rigid traditional dress silhouette and contribute to the overall sense of restriction - purified tunic shape and body curve.

Martin Margiela’s working method can be concluded partially as de- and re-construct garment, display and emphasizing details. The element he choose to work with are not always the functional part, but by deconstructing, he achieves to extract the essence of the topic.
II. Motive

A. When Function Meets Fashion

Peter Thornton says in his book ‘Form & Decoration - Innovation In The Decorative Arts 1470-1870’: ‘Style does not originate in a vacuum’; ‘There is no such thing as a totally new design [11].’ It sounds offensive to all the designers, but the connections in inspirations are inevitable.

A background in Product Design where function is taken as the essence and problem solving is the methodology, has been challenged by the new field of design I was going to explore. It all began with a ‘discipline-shock’: fashion designers rarely think about function. Soon I learnt that fashion designers often find their inspiration from an expression, style, technique or visual effect, and develop designs by endless examining in aesthetics, then move on to the prototype stage when practicality has to be considered such as construction, quality, price and production. However, the major power that affects decision making is aesthetic, comparing with functionality that of Product Design.

Function was the first fraction I had in Fashion Design. However, it could as well be the first contact to Fashion Design. The interface of the two design branches may be the very first fraction - function. Problem solving is naturally my methodology if I could transplant it across discipline through my point of view on function inspired fashion.

Function can inspire design in countless ways: Hussain Chalayan’s design carries hidden; Agne K. reflects carry product details into garment; Hoiming carries garment like bags; Martain Margiela deconstruct garment and highlight carry features.

My approach to ‘carry’ should features, me as a designer, my aesthetic, logic, method and personality. It indicates that this project is based on an analytical method and develop further through transformation by bridging concepts and disciplines.

“The term ‘problem solving’ is used in many disciplines, sometimes with different perspectives, and often with different terminologies. For instance, it is a mental process in psychology and a computerized process in computer science.”[12] It ‘consists in using generic or ad hoc methods, in an orderly manner, for finding solutions to problems [12]’. Within the design field, Industrial Design is one of the disciplines in which the term is often regarded. For instance, a phone design project may use ‘problem solving’ thinking as a starting point - defining current problems, applying appropriate problem solving strategies to solve the problems, and results in new or improved functions.

Problem solving has not been a method clearly exclaimed or explained in fashion design. According to Herbert Simon’s theory, any formalized symbolic problem can be solved [13]. Problem solving strategies may differ in different discipline. The principle of problem solving is that its behavior involves means-ends-analysis, i.e. breaking a problem down into subcomponents (subgoals) and solving each of those [14]. ‘The problem, recognized but not solved, is that of devising languages of design in which the complexity and speed of the designer’s artistic modes of thought can be combined with scientific doubt and rational explanation.’[15] Problems may be degraded to processing criteria that works for expression and aesthetic. The strategy appropriate to fashion design might consist both methodological and intuitional decisions, as well as the balance.

‘Carry’ as the chosen function in research, is at the centre and thus the ‘problem’ to solve. Questions are to be discussed, for instance what is ‘carry’? How to realize ‘carry’? What do people carry in life?

B. Function-oriented Problem Solving

To explain how problem solving works in product design, an example is given. It is a research taking ‘carry’ as the core of problem and resolved current problems when using bags. The framed problems are losing items when switching bags, hard to find what’s-in-need in bags, and too many bags to carry at once.
Flow chart (II.01) illustrates the work flow. We can see from the chart: the first half is concept development when no work involved shape, colour or material; the second half - visual development of concept- starts with sketch when the aesthetics must be taken into consideration but after function. Until the last step, no decisions of aesthetic has been made. The concept visualized itself through experiments when the construction was ready to use. No extra elements were added for the purpose of aesthetic only until the very last moment of product finalizing.

The bag supporting system, ‘Carry System’, achieves to solve the framed problems. Free both hands, easy to carry/wear. By separating bags for specific purpose, searching for items is relatively easier than when mixed.

Having seen the demonstration of ‘Carry System’ in how problem solving works in a function-prior design project. It is clear that function cannot fail in a function-oriented design. Problem solving works logically in developing. Could they work for aesthetic, for an aesthetic-prior design field, for Fashion Design?

If taking problem solving as a methodology that manages structure, frame, decision making and so on, theoretically it should be able to work for any project that can be analyzed by structure, frame and decision making etc. However, how a function affects fashion when the function’s functionality is not the criteria of success? Therefore, how to solve a function from the expression perspective? In other words, how does a function look like? If one says a bag is how ‘carry’ function look like, I would question that the common sense has restricted his/her mind, for ‘carry’ can be a form of pocket, saddle, cradle, even coffin?

C. Resolve ‘Carry’ in Action - The Act of Carrying

Carry is an action. The dynamic moment of function is interacting. Function exists in the meaning of using. The ‘use-meaning’[16] of function means the importance of being a function is the dynamic moment of being used. The act of carrying is the moment of interaction and thus one of the strongest moment of carrying expression.

Carry, v. support weight and move [4]. The features of ‘carry’ are ‘support’ and ‘move’, which describes a dynamic status. Compare to the static phrases like ‘the expression of wearing’ and ‘the expression of garment’. The latter give a dynamic image of carrying, which equals to support weight and move.
Carry as an action need two sides: the one side use force to hold up and the other side being carried. They are a pair of counterparts consist ‘carry’ function. In the one way, people carry garments by body. In the other way round, garment is a capacitive carrier that wraps and contains body, like a luggage carries personal belongings. The relativity of ‘which carries which’ offers an interesting discussion. It can also be understood that the communication between the two is actually the function’s existing moment.

The scale and frequency of interaction need further research, which will be discussed in Chapter IV: Method.

D. Minimalism and The Aesthetic for Sustainability

“We all carry a life”, Vik Muniz said in the documentary ‘The Waste Land’.

It is a film documents his art work at Jardim Gramacho, the world’s biggest garbage dump, together with the garbage pickers. It is a shocking and moving film. Shocking is because it shows the hard life of garbage pickers who are shockingly positive in life. Moving is when they try to move the harsh life forward. The big contrast is between the harsh life of the garbage pickers and their genuine loud smile of content, positivity which almost feels too naive, and the resilience to live on in harsh.

I couldn’t help comparing: how much I have and how satisfied I am. It is ironic. Could it be true that the more one has, the more one wants, and less satisfied? Borrow a word that familiar to everyone:” I have nothing to lose.” It is branded in the brain because of the spirit it connects to: conquer a new land, discover a truth, challenge limits, and so forth. The garbage pickers have less material but show no less spirit than anyone else in better consequences. On the contrary, having less could make life simpler. Thus fear less and feel free.

It happens to match a golden rule in design - less is more. ‘Less is more’ is a 19th century notion means that simplicity and clarity lead to good design. [17] The phrase was adopted by architect Ludwig Mies van der Rohe as a percept for minimalist design. [Wikipedia, online] Minimalism is any design or style where the simplest and lest elements are used to create the maximum effect. In other words, where the essence or identity of a subject is exposed through eliminating all non-essential forms, features or concepts. [18]

My immigrating life inspires me on carrying a life. I carried my life in a flight-luggage size, and it expanded into 20 boxes in a couple of years, disregarding furniture. I dare not say that all are necessarily needed. There were quite a few hot-head shopping moments. Those are disposed soon enough during my frequent movings. I wish I did not buy them, which saves money and lives environmental friendly, as well as that I could have avoid troubles for moving and make my life simpler. Keeping the essence (or identity) and eliminating non-essentials, isn’t it the very philosophy for both life and design?

Furthermore, “we all carry a life” does not merely talk about tangible things that could be carried physically. The intangibles, such as the spirits the garbage pickers bear to carry their lives on, are more of a wonder. It is the spirit that makes them strong and respectful. Life is a journey in which we all carry our belongings, emotions, identity and relations.

The act of ‘carry’ is not restricted to only carrying practical items. It also means to have a feature, to bear a thought, to develop an activity, etc. The intangible carry can not be measured in shape or size. When ‘carry’ comes to its broad meaning, the project concept is linked to the question: what do people carry in their life? In relating to the question above, what I see is that people are often stressed by carrying too much unnecessarily whereas unaware.

The images (II.03-A/B/C/D) might give you a more direct and impressive idea about what do people carry in life. The load of life has its heavy end towards the intangibles: emotion, identity, relation etc, which we can not escape while living. When we have no choice of escaping, unload the unnecessary burden, keep a positive spirit in life, might be the wise solution. Hence, the aesthetic of ‘less is more’ fits the spirit of the concept: purchase less, carry less, keep simple, be friendly to nature, and be responsible to future. Minimalism may well be the aesthetic for sustainability. When the criteria of beauty is clean and simple, the consumption of resource for fashion industry will decrease. Of course, the shopping habit has to be turned when people understand and could afford shopping ‘less is more’.
II.03-A image: what do people carry in a life?
II.03-B image: what do people carry in a life?
II.03-C image: what do people carry in a life?
What we need to carry in life?
- Tangibles & intangibles
E. Resolve ‘Carry’ in Context - Carry A Life

Sabine Seymour said in Functional Aesthetics: Visions in Fashionable Technology: ‘Context conveys the story. It allows for the intent of the product to be communicated by the creative practitioner and comprehended by the consumer.’ [19]

Context is the atmosphere that design is set in and which should be readable and corresponding to the audience. It is the interface between design and audience. And it is part of the interpreting from a function to an expression. A pair of contrast carrying contexts are experimented.

**The context of carry**

The research of context starts with a project called: ‘Åxhibition - the shopping wear’ (II.04 and II.05). It took place in a famous Swedish shopping chain Åhlens. The research documented three models’ shopping process in their shopping wears. The transparent material displays what goods they shopped. It tells personal interests and shopping habits, and what’s more, shows their need-and-desire. The silhouette of each outfit not only interacts with the body, but also the goods which gives tremendous impact comparing to the former. The models’ silhouette is a reflection of what and how much they carry. In addition, volume, enclosure and enter are three key factors that feature functionality of carry and need to be fulfilled at once. When one is disabled among the three, carrying is disabled consequently.

‘Åxhibition - the shopping wear’ is a reflection of the unsustainable and over-purchasing life style. Impulse and greed are the driving. It raises an open question and makes me think: “what do we need to carry in life?” In the documentation of Åxhibition - the shopping wear (II.05), when the models displayed triumphant on the floor, they were shocked by their own consuming speed.

II.05 image: project ‘Åxhibition - the shopping wear’
II.04 image: documentation after shopping, ‘Åhxibition’ - the shopping wear
The other context research, ‘Nothing But Body And Soul’ (II.06), explores carry in the opposite context of Åxhibition - the Shopping Wear. It displays three carry-disabled outfits in the opposite circumstance of shopping wear - a vile bleak white nature in the middle of nowhere. The interaction of carrying is presented by the disabled key factor out of the three that is concluded from the previous research. For instance, up-side-down pockets, and blocked entrances. Moreover, transparent material is once more used, aiming to show the interaction in its status of being empty and lean. What is carried physically by the outfits is nothing but the body. When the image is presented in such a bleak circumstance, especially in comparison to the shopping-dominating scene, it tells the lines of simple spirit. The question of what and how much we carry in life merits each and everyone’s philosophy of living.
Decipher ‘Carry A Life’

‘Life’, noun, the existence of an individual human being or animal; the condition that distinguish animals and plants from inorganic matter. [20]

This project is entitled ‘Carry A Life’. The object here, ‘a life’ is the key content of my design and it is a vital context of ‘carry’. Here I granted life a double meaning - a living life and a living body. If say ‘a living life’ is an abstract concept, ‘a living body’ is the flesh and blood that can be an object to carry.

Considering our body as what we are carrying in life, a body can be reflected to luggage of life. It makes an interesting circle as illustrated in II.07. It is: body carries garment; luggage carries body; life carries luggage; and garments carries life. Body and life is the objects to carry, whilst garment and luggage are the container carrying them. Or look in a different way, body and life are the carrier of garment and luggage. Which carries which depends on your perspective.

The relativity of ‘carrying or being carried’ is the philosophical relationship between body and garment, which is beyond the frame of traditional bag and garment design. It is a challenge to create garment with carrying method instead of block pattern. And it is a challenge to translate a function from an action to an expression, from a movement to a static apparel. What challenge more is the minimalist design criteria to discover the aesthetic of sustainability.
III. Aim

The aim of this project is to explore how carrying affects the expression of wearing. The project is initiated by the interest in the relation of function and fashion. “Carry’ as an example function is investigated on how it affects expression. It is analyzed, decomposed and translated into a conceptual collection. The interpretation of ‘carry’ is not functional oriented or literal-symbol inspired. The dynamic moment of functioning is more important in my research, rather than a static expression of garment. Having the research question in mind - what do we carry in life - an aesthetic for sustaining is developed as result.
IV. Method

Problem thinking as my methodology directed the project development. The constant questioning and solving made my design rationale.

‘A design rationale is the explicit listing of decisions made during a design process and the reasons why those decisions were made. It should therefore include: the reasons behind a design decision, the justification for it, the other alternatives considered, the trade offs evaluated, and the argumentation that led to the decision.” [21]

‘Carry’ is analyzed as: a linguistic term, a physics phenomena, and a use-meaning act. And then transformed along with the development of units.

A. Analyses: The Abstract and Extract of carrying

Carry: support the weight of [22].

From the definition, keyword - support - derives the first analysis: the formating of carry action requires at least one force point to support the weight. Analyze the act of bag carrying, it gives a map of possible stress points. In practical cases, the stress point from weight is not the only support needed. The support area is the other essence in the carry formation. It supports bags from a different direction to stable the bag in movement and ease the pressure on the stress point. A supporting area map speaks clearly itself. Theoretically, one (or more) stress point(s) and one (or more) supporting area(s) forms(-) the function structure. Connecting them makes the map of carrying force. The enclosing shape of point and area becomes the forms of carry act. It translates carry from physical force into ‘forms’ (IV.01).

The other essential word is ‘weight’. Unlike the ideal pointed weight in physics, a practical weight has a volume. Considering volume as simple geometrical form, a prism for example, volume is created by area and length. In the case of a simple bag, it becomes bottom area and height. In addition, what is contained increases and reform volume. Volume is not equal to capability. In reality, a bag’s capability is far more complex than maths. It is affected by a number of specifics such as suitability of what is contained, material flexibility and so forth. The importance of volume is that it proves the object shape of carry.

The effect of carry is when force is applied. Force effect is not a formating element, but it is a vital aspect of carry. It is the factor that shows how carry performs in action. When force is applied to a carry media, the stress spreads and causes change on it. The research photos use sensitive fabric to amplify force effect. One (or two) standard pieces of fabric is pressed by weight, generates various effect on the textile surface - bend, crease, distort, twist, expand, extend, facet, knot, split, squeeze, empty, etc. (IV.02). Such effects present themselves as the effect of carry, even if the stress is not actually existing.

Analyses extract the act of carrying into three abstractions: the form, the volume and the effect of carry. It helps free the mind from common frame of carrying: haunch forward, lean aside, hold in hand, etc. To put the analyses in use, a transforming method is needed. During experimenting, further analyses are discovered which unveils the scale and frequency of carrying.
IV.01 illustration: a body map of carrying force points and supporting areas.
IV.02 image: research photo of force effect
B. Unit Draping

Unit draping is a method technically as its words saying, that is to drape with standard pieces (units). It is the bridge to transform the extractions with ‘carry’ features, and thus gives form to abstract concept.

First of all, give an example of how unit draping works.

Project ‘Carrier Wear’ (IV.11and12) researches the act of carrying in the shape of basic garments. Carrying space is created by doubled-layer as well as the enclosure and overlapping. Standardized units in form of tube with additional winging pockets size 20 by 20 cm is used in this session. It is easier to imagine it as a T-shirt shape whose sleeves are the pockets. Working with the ‘T-shirt unit’ with only one cutting on each unit, i.e. cut at centre front, or cut diagonal from neck line. With one or more ‘T-shirts’ in combination of the same or different cut, silhouettes are generated.

To develop corresponding units (or sets of units) is the foundation of unit draping. The unit features are generated through the table (IV.03) which lists the connection of features and remarks of connection.

<table>
<thead>
<tr>
<th>‘Carry’ Feature</th>
<th>Unit Feature</th>
<th>Aim</th>
</tr>
</thead>
<tbody>
<tr>
<td>basic bag shape</td>
<td>rectangular</td>
<td>simplicity</td>
</tr>
<tr>
<td>accessibility</td>
<td>opening</td>
<td>interaction</td>
</tr>
<tr>
<td>fastening</td>
<td>zip</td>
<td>unit flexibility/interactivity</td>
</tr>
</tbody>
</table>

To develop corresponding units (or sets of units) is the foundation of unit draping. The unit features are generated through the table (IV.03) which lists the connection of features and remarks of connection.

IV.03 table: the interpretation from carry features to units

‘Wearable Carrier’ (IV.05-A/B) is developed with the first carry-feature unit set. The illustration (IV.04) shows the first basic unit on the left, and the upgrading units to the right. Units are upgraded by the length and having more interacting entrances (illustrated as holes). Each unit remains (mostly) unchanged during its dominating section of draping. The increasing number of interacting holes, however, push each unit to the limit. For the reason that the amount of interaction does not necessarily correlate to better aesthetic. Higher interaction often means higher complexity. Stretchy material enables body parts to go through the openings more easily. In addition, the flexibility of knit enables more treatment on the unit itself. The openings are able to be bended, twisted and so on, which also means possibility to increase interacting.

Carry featured unit is developed during the entire project, and was more specified with carry features. Unit setting of Carry A Life keeps the simplicity of the base unit in Wearable Carrier. The most important development is the improvising with zips. It includes the variety of zip fastening, such as X- and O-form double-slider zip (image IV.06). Despite that zips are one the most common elements in carrying products, it serves for better interaction. Units generate silhouettes by interacting through holes. Zips increase possibilities in form. O-form double slide zip works as interacting hole as well as enclosure. Open ended X-form double slide zip not only gives closure and partial openness, but also complete disconnection and pointed connection. Unit illustration shows the variability of an original unit with X-form open-end double-slide zip. (See IV.07.)

Interaction is the most important criterion in ‘Carry A Life’. Unit draping is a vital method throughout the developing process. The following illustrations are examples of unit sets used in the project. Unit A and B (illustration IV.08) show the improvising process of a unit from left to right. Pictures following are the documentation of the unit set A’s draping process. (Image IV.09.)
IV.11 image: ‘Carrier Wear’ by Zizi Zhu

IV.12 sketch: project ‘Carrier Wear’


IV.05-B image: ‘Wearable Carrier’ bigger pieces’ garment expression
Although unit set is suppose to frame work, it is not a frame of creativity. A small modification could give big change in expression. For example, the same unit in different materials and layers. Example of double layer unit is shown in work process photos (IV.10). Whereas the same unit in single-layer black felt behaves completely different.

Unit draping degrades the complexity of shaping procedure. It acts as a solution by framing a complex problem into controllable sections. The unit set is the vital formula that translates function features into shapes. At the end of each unit draping section, aesthetic selects better models to develop. So could the process continue until satisfied.

Unit draping is the way I use to approach fashion. It is a method derives from problem solving thinking. It functions as the sinew between analyzing and form. The unit works similarly to the conventional paper pattern - both are repeatable. Though it might be the best in finalizing a design for production, paper pattern is less effective in shape developing. Comparatively, unit draping is easier to construct, control and adjust.
IV.09 image: documentation of draping unit set A.
The scale and frequency of interaction

To interpret ‘carry’ in abstraction, it requires an effective translation. Unable to give any hint by borrowing literal symbols, the presentation of carry relies on essential features of ‘carry’.

‘Wearable Carrier’ discovers scale. By using longer piece and cutting holes to wear through, the collection appears a transition from accessory to garment. Accessory looks, such as hat- and bag-look, are made by smaller pieces (top line of II.05 image). A vest-look needs at least the coverage of chest and shoulders (bottom line of II.05). Bigger pieces give a variety of garment expression (II.05-B). Details on garment look, such as double layer and slit openings, give the expression of pocket. Body getting through the cut holes is a mimic of putting hands into pocket. When more holes are cut, the interacting possibilities grows bigger too.

By randomly generating pockets, ‘Carrier Wear’ explores the feature and limit of carrying with pockets. Bulky volume expresses the signal of carry. Whereas the chunky volume is disliked by wearers. And capacity and conveniency are wanted factors. The most used and trusted pockets are those closest to common side pockets. The relating space near flanks are also well perceived, as well as forearms. The least used pockets and space locate at back and shoulder. Potential carry space round waist and hip are noticed but not used. The experiment also concluded that basic-garment pockets mostly interacts (are interacted) with (by) hands. The moment of interacting is putting-in and taking-out. The formation of the interaction is hand (part of body) goes through the opening of pocket and reaches the limit of enclosed space. Therefore, we can say that carry interaction is limited by the times when body get through pocket openings. (IV.13)
IV.13 image: the moment of interacting
V. Development

My work flow can be concluded as the chart (V.01). The three proceeding steps: abstract/extract features, transform features to shapes, expression development, are continuously repeated.

The process of form development is the actual developing of unit sets. It was the process in searching of the right unit base. The unit base is expected to have the feature of body-scale, simple and interactive. According to analyses, the form of carry, the object shape of carry (volume), and the effect of carry, new unit sets are developed with zips as the most important feature. Then they were improvised by changes such as cutting, material and layers. The intimate interaction between body and the garment, is activated by the volume of body.

By draping materials into the most simple and basic form, it helps me to learn how different materials reflect to the same drape, which gave good perceptions for later on material choices. Process photos shown here are examples of draping in synthetic jersey, light felt, vattulin (Swedish), canvas, plastic, tubular knit, silk.

The development of the collection is fundamentally based on the improvising of unit sets. A few unit sets are used in different materials. Twenty interesting shapes (V.04) were picked which were generated by four unit bases in various materials. (See image V.03.) The four unit bases are as illustrated (V.02). It is obvious that they follow the analyzed features which is explained in the previous chapter. (Review table IV.03.) Zips are embedded in each unit to maximize shaping possibilities. Shapes of the interesting twenty are shown in work-process photos. The replication of similar structures can be found in several shapes. For example, shape one, two and eleven. These shapes are generated from the same unit base. The low transform-ability is the cause for it to be dropped. Whilst other units were kept and improvised.
The increase and decrease of carrying symbols

Ten outfits were soon developed after good exploration of materials. The line is seen in image. The replicating structures were decreased. Most chosen pieces have individual expressions, even if some are made with identical units. A good example is outfit two, six, and seven (top). Process photos are given in pairs to show the before-and after comparison. The developments by then are mostly enabled by material substituting and the continuation of unit improvising. The use of trim increased during this stage, hoping to amplify the expression of carrying. However, the usage had never become overwhelming, due to that the criteria of design was to express function through interpretation. Despite that, trims play fatal roles in shaping interactively and in highlighting as carry reflections.

Symbolizing carry took place not only by the using of trims, but also in material perspective. Canvas was the chosen symbolic material. Thus, it was the most used material in the collection. Meanwhile, the tubular knits that as developed for the research, 'Wearable Carrier', has been kept. It's three-dimensional stripe is a perfect translation of the force effect (c.f. analysis: force and effect). Knits and canvas, therefore, became the two major materials of the 'Carry A Life' collection. In addition, the comparison of the two - hard and soft - presents the concept from concrete to abstract. In other words, the collection could be lined up in transiting from shape-treat to garment-treat. Wearability becomes important at this stage.
Meanwhile, stripe in design is the reflection of my understanding of life - a track, which one can travel along and interfere the destiny. Due to that the stripe’s connection to the concept is abstract, it is used more obviously than the literal-direct symbols. The strengthening of stripes can be seen in the material changes from earlier to later stages.

On the left (V.04), the selected 10 outfits could give a clear demonstration of the criteria of selection. On the one hand, outfits need to meet the basic criteria of garment as well as aesthetic. It means provide enough coverage. On the other hand, the aesthetic criteria discussed above and in earlier chapters create the character. Given an example, outfit 1 looks like a loose top with billowy skirt. The unique line forming on shoulder and sleeve is due to the draping method that allows a different tension other than the conventional sleeve. Selected outfit 1, 2 and 7 show good balance of two silhouettes generated by two materials. One sharp and the other soft. Volume is exaggerated in outfit 3 on bottom, 4 at calves, 5 on shoulder, 6 round thigh, 8 at hip, 9 round bottom, 10 at back.

Illustration V.05 gives a clear overview on silhouettes and their features. What can also be seen is the short step development from V.04 to V.05. The development are mainly clarification of concept features. Take the same outfit 1 as example. The enclosed skirt bottom is the new adding feature, which exaggerates ‘carry’ in term of enclosed volume with a neat envelope bottom. From V.04 to V.05, outfit 2 had a big change. It is clear that the ‘after’ has minimized the outfit by discarding layer and refining lines.

The colour is equally effected by minimalism. Image V.06 materialized the first line-up (illustration V.05). Material board is following in the next page (V.07). The neutral tone - black, white and beige - is chosen as the most purified colours. The bright colours are cut out by the aesthetic of sustainability - minimalism. This stops the audience connecting colours to personal preference, whilst allows to show the strongest emotions this project refers to (c.f. Chapter II Motive - D). Stripes are brought into use, but still in various qualities. The light tone stripe fabrics are a little weak to see. Trims are used in the way to high lighten interactions such as the neckline where indicates the body goes through.
V.05 illustration: first line up and the respective original forms

V.06 image: pre-collection on model
The line up of the pre-collection has weaknesses. First, the soft material and weak colour tend to eat up the concept. Interaction is lost in the soft folds. So does the volume. Second, the high lighted trims took over the attention and make them feel like borrowed literal symbols. It is against my motive to do so. Last, the expression lost part of the meanings of life - the hard, sharp and heavy side. Hence, black was brought into use. Big blocks of black and white sharpen the outline effectively. Furthermore, stripes are developed with black-and-white contrast. Meanwhile, the widths grew broader. Image V.08 shows the line-up after.

Perspective images of line-up III can be find in V.09. Nine outfits named from A to I, are very close to finalized outfits. At this stage, ‘carry’ as inspiration has completely lost the original functional meaning, and become conceptual garments. Only the details has literal carry symbols.
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Reflection

From product design to fashion design, I have explored my way through design. The collection is the outcome of my exploration which explains my discovery in fashion concentrating on form and aesthetic. Minimalism turned out to be my natural design aesthetic. It didn’t happen because of my requirement, but it had been done when I found my works satisfying.

Through the project, I find my methodology of design, that is problem solving. I find unit draping to be an efficient shaping method. They are the key to design. ‘Carry’ function led me through this example design. What it discovered on the way are life-long valuables.

The translated ‘carry’ function has lost its real function. Instead, it inspired at each and every step, from shape to aesthetic and into all the details. I could say it has been digested and absorbed, then applied back to design. My interpretation in function to fashion is not literal, meaning it doesn’t follow the common aesthetic of ‘functional wear’. My aesthetic decision is a lyrical expression - the expression of the self. [23]

The expression of being-carried is a visual illusion, for it can not against science. It is possible to realize by mechanists or artists. However, it is mentioned in this project only as the counterpart of carrying. They are the extended meaning of life and carry. (Review II.03.) Considering our life as a journey, the life is what we carry including tangibles and intangibles.

My collection receives comments that there are Chinese aesthetics in it. It is the same as the find of my design language - minimalism, it also came as part of my nature. There was a time when I intended to learn how to show my culture identity through my design. It troubled me because whatever I could think of adding in were not belonged there butunnecessaries. An extra Chinese braided button can not make a design Chinese from nature. Even though it may be enough for a commercial purpose. Until one day I realized adding is never the right way to design. My design identity is from my eyes and hands with or not my brain’s notice. The identity is in one’s blood. Quote Yvon Chouinard’s words: ‘In anything at all, perfection is finally attained not when there is no longer anything to add, but when there is no longer anything to take away, when a body has been stripped down to its nakedness.’[24]

The colour of this collection is purified into black and white. Partly because of the topic, Carry A Life, is a serious topic. I chose to use half tone to tell my view of life - there are black and white sides, as well as the mix area (referring to stripe); there are plain, heavy moments, as well as heaven light and dramatized ups and downs, turns and folds.

Examine the final outfits, the stress points seems mostly locate on shoulders. It is because shoulders are the most efficient body part for carrying. We possibly have noticed in daily life. We use arms, hips, back etc much less often, and more for supporting. That is the reason that there are less pieces featured on other stress points.

Reflecting the developing process, unit draping has been an effective shaping method. Comparing to traditional paper pattern, it is easier to control and generates forms in bigger scale. To achieve comfort and fit, this method does not provide convenient solution, but takes time to explore and experience to construct.

All in all, as the aim of the project declaimed, I have accomplished the exploration of translating a function into fashion expression, discovered methods and material, and presented a function-inspired conceptual collection. The example collection developed along the project, is an exemplified result of how to interpret function into fashion expression. It is conceptual, close but not ready-to-wear. It could be interesting to further develop this collection into ready-to-wear in order to discover its commercial value. Unfortunately, it will not be documented here in this theoretical exploration.
VI. Acknowledgment

First of all, I would like to express my appreciation to Åke Hernqvist and Coats Industrial Scandinavia AB. Thanks to your generous sponsor, this project could be developed and finished smoothly.

A special thanks to all the people who helped me during the tough long process of this project and my study. Professor Clemens Thornquist has been a tremendous mentor for me. I would also like to thank my tutor, friends and families: Ulrik Martin Larsen, Karin Schneider, Barbro Scholz, Dagma Trodler, Elsa Lindahl, Klaus Herzberg and Daniel Wallenius. You offered me support and gave me strength in the most difficult time.

More thanks to people who I’m not able to list here. Words cannot express my grateful enough.
VII. References

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[Image references]
[I.03] Suszme Lee, Fashioning The Future - Tomorrow’s Wardrobe
[I.05] Check out Nike Sportswear's sexy as fook What The Max collection
[I.06] Contemporary #camouflage pattern pyjama shirt from Patrik Ervell highlighting the new importance of sportswear hybrids at NYFW
http://wgsn.tumblr.com/image/42919879460
[I.07] Short track speed skater Krysia Child modeling 2XU sportswear
[I.08] Nike Sportswear AF1 Digi-Camo Launch Event
[I.09] Velo UK - protective gear for cyclists
http://www.velouk.co.uk
[I.10] Mansion Martin Margiella, [online] vogue.co.uk, accessed 01/02/2013
VIII. Appendix

A Critique on THE FRACTION by MA student Karin Schneider

Ms Karin Schneider’s collection FRACTION aims to investigate on the principles of functional design and its expressive potential. The questions it raises are ‘how much function can an expression contain’ and ‘how much expression can still be considered functional?’ It is a daring collection targeted for future, not the past, like Sportmax. The latter’s design is also inspired by future. Neither are nostalgist. What’s more that links their work together is the fond of clear structured design language: layers, straight quilt, pleated skirt. The big difference is the latter are sport inspired slick fashion design, whilst the Fraction collection is expressive sport wear design.
The collection has developed quite extraordinarily from the field of functional design. i.e. the padded vest is a good edge to the expression. Unfortunately, she didn’t find a better solution to balance and keep function and expression both. Take the padded jacket as example again. There is little functionality remains in it, not even keep warm.

Her profound knowledge in sports wear had given her a confident view of the field. However, it might work on both sides. The pieces was developed individually, or has little connection to each other except the fabrics repetitive usage. The reason lacking connection is due to the unspecified target occasion, to be specific: the activity. Is it for outdoor trekking, or survive camping, or hybrid running? For example, the padded performance dress? Consequently, the individually developed pieces do not hold together, not mention ten outfits. They feel assembled, instead of what was expected unified collection.

Ms Schneiders professional sport wear design background has enabled her access to the functional details, including fabrics, trims, cutlines and constructions. Those details symbolizes perfectly as function labels. The overwhelming labels actually take the glory of the real creative part of her work, because without them there’d be little function left. From personal point of view, I’d like to see how much function expression one can achieve without borrowing existing easy symbols. It is a pity. These ingredients are mostly what appears functional in the collection. These ‘safe’ ingredients covers the whole collection. How much functional expression is given by the rest of collection? Is the rest only expression? If not, how much functional expression is discovered in the expressive part? Perhaps, the padded fabric and structural knit which sasses up to the winter silhouettes?

All in all, Ms Schneider’s collection is a good reflection of her research. And it has explored the in-between area of function and expression. Even though the research questions remains non-answered. I guess it is saved for the audience to decide.