KLEA FLINSPACH

CYBER NATURALISM
- a future-orientated macro trend and its six sub-developments -

PAS NR. 500627000

INT. FASHION & DESIGN
3.190 WORDS

GRADUATION 2D DESIGN

AMSTERDAM FASHION INSTITUTE

22. JANUARY 2014

Suzanne C. van Rooij


CONTENTS

INTRODUCTION ................................................................. 01

CYBER NATURALISM: The Explanation of the Overarching Concept .......... 02

FRISKY SCULPTURESQUE: A quirky approach to rework the humans peculiarity .... 03

NATURAL DATA: The interpretation of the unknown .......................... 04

ADORNMENT: The integration of a new definition of identity ................. 05

IMPRINTED MYSTICISM: A fairytale about the future imprint .................. 07

FRAGILE APPRECIATION: The acceptance of the vulnerability of the human body .. 07

THE NEW SKIN: The possibility of a new intelligent surface ................. 09

CONCLUSION ........................................................................ 10

REFERENCES ........................................................................... 11

APPENDIX I: Poem by Rainer Maria Rilke (1922) ........................................... 13
Current developments like for instance the Google Contact Lenses\(^1\) and the Electronic Skin\(^2\)(Fig.1) show today's, 2014, tendency towards a tech-enhanced society. Being applied on the body these and similar devices are able to monitor the glucose level or exaggerate the senses to improve the body's physical strength (Morrison 2013). As these gadgets are directly applied on the eye and on the skin, they flourish the idea to integrate technology directly into and onto the human body. Imagining this integration, I wonder what the possible directions are, in which this trend can develop. Being a conceptual fashion designer with great interest for natural science and technology I contracted a passion to create a personal fashion vision on this development. Firstly, diving into the theories of this future scenario, referred to as 'Cyber Naturalism\(^3\)', I create my own personal vision of what might be the far future scenario, to secondly develop six independent sub-trends, each corresponding to the macro trend of 'Cyber Naturalism'. I situated this scenario in the year 2030 as it still allows time to develop but is not unimaginably far.

The overall concept originates from the possibility and fear of technology overpowering the human nature, which would create a nightmare and not a dream (Hayles 2009). Therefore, it is important to create a future that includes the awareness of the balance of human biology and technology. The definition 'Cyber Naturalism' derives from the idea of Cyber Sapiens, a post human who can be defined as partially biological and partially digital(Walter 2006). To redefine and apply this definition towards and around society enables the creation of Cyber Naturalism, which describes the combination of human biology and technology in a broader and interactive sense.

---

\(^1\) Google Contact Lenses: This project, started in January 2014 by Google, developing smart contact lenses, that can measure the glucose level in tears of people with diabetes (Otis and Parviz 2014)

\(^2\) Electronic Skin: this device as thin as a temporary tattoo can be applied on the skin. It is able to measure and store information about the wearers' movement and can receive diagnostic information to then release drugs. (Morrison, 2013)

\(^3\) Cyber Naturalism is the definition of a tech-enhanced society describing a scenario of a combination of biology and technology.
Within the first chapter, the concept and scenario of 'Cyber Naturalism' will be explored and eventually lead to the manifestation of six differentiated sub-trends, that play a role in this shift towards a tech- enhanced society. As they are part of this development towards a future scenario, the sub-trends are situated in the near future, 2016-17, influencing and triggering the awareness of the creative industry to approach the integration of technology. Inspired by the mutual influence of fashion and humans, my aim as a conceptual fashion designer is to approach this futuristic matter via fashion as it exemplifies and eases the introduction of these possible developments.

Using the conceptual approach to create a storytelling concept, the six subthemes give attention to different influencing aspects of this happening: 'Frisky Sculpturesque' explains how a look at the past can lead us to this new future, while the concept of 'Natural Data' tries to visualize the unknown shapes of the virtual world\(^4\) using an intuitive approach. The chapter of 'Adornment' takes on the anonymity of the virtual world and asks for reinterpretation of the personal identity. What should and what will be the imprint\(^5\) of this future generation, is analyzed and interpreted in the topic of 'Imprinted Mysticism' while 'Fragile Appreciation' deals with the idea of how the body will adapt to the integration of technology. Eventually resulting in 'The New Skin', a creative proposal of how this integration of technology could be realized.

**Cyber Naturalism**: the explanation of the overarching concept

Observing the previously mentioned introduction of technology in today's society and the tendency towards an even bigger influence of technology in the future, show that this guiding concept is a mega trend that will have a huge impact on the future of society. In this future, technology is a helpful addition. Introduced in and on the body to exaggerate for instance the sense reception or giving extra strength by enhancing the muscles the trend shows a new engineering attitude to life. Being surrounded by technological gadgets and new technological possibilities, the citizens of this future need to remain the balance and use the new possibilities of technology without becoming licentious. This self created idea of 'Cyber Naturalism', is a reaction on the misapplication of technology which is starting to become visible in this day and age. The response to this not

---

\(^4\) Virtual World is the term used to describe an online based environment that is shared by individuals, creating a simulated world.

\(^5\) Future imprint describes what a generation leaves behind in the future. E.g. Waste, memories etc.
desirable overpowering of technology, is to focus on the positive and useful integration and application of technology within the fashion business and its consequential effect on today's and future society.

**FRISKY SCULPTURESQUE: a quirky approach to rework the human's peculiarity**

*The search for the future leads us into the past* (Pauser 2011, p.33)

It is here, where future starts: The frisky reworking of the past. Creating thoughts about the future requires a recapturing of former trends and behaviors, as retro-perspectives on the evolution reveal the essence of human peculiarities. Gathering an archive about the past provides a broader view on the human evolution. Old radios for instance represent the freedom of information while old ceramic statues depict the wish for nostalgia and an idyllic world. To gather these fractions of our past gives an inside into the essence of the historical development. Venturing this retro trend one step further, it is important to reinterpret the archive, to give a deeper insight and create references of the past that quote the essence of the society's oddment⁶ (Pauser 2011). One example for this recapturing is for instance the work of Canadian artist Shary Boyle (Fig.3, n.d.). Boyle brings the traditional ceramic into the present by reworking this traditional craft in a grotesque and storytelling way (Pauser 2011).

Regarding this development of reworking as a vital step towards a balance of biology and technology it is important to not forget about the significance of quoting from the past and creating new combinations and interpretations. The frolic of mixing the present with the past and altering the past to rewrite stories, gives rise to a new approach that can lead to the future. In this context fashion, as part of the creative industry, has the freedom to explore the grotesque without limitations. Creating unusual combinations of materials, proportions and structures, new intriguing combinations are explored that trigger thoughts about values and stigmas of the human existence. Refocusing on the essence of the human existence it builds a foundation for a wise integration of technology.

---

⁶Oddment: in this context defined as the leftovers of past trends, the key items of a past tradition.
This frisky reworking is visualized by new mixes of traditional colors as for instance in the combination of a royal red with a soft citron or a night blue with a bright white. Visualizing the importance of this quirky reworking, this concept especially contains traditional materials, like ceramics and lace, changed by the means of coatings they demonstrate the importance to rethink traditions and to redesign it into something unusual and new. One example for this combination of old and new is a ceramic embossed with traditional patterns and coated with a rubber (Fig.4, 2014). The play with proportions and unusual combinations enhances the easiness with which this matter should be approached.

**Natural Data:** the interpretation of the unknown

Reworking the past is followed by an imagination of the unknown. Approaching a new future entitles to work with the imagination, as new inventions have to be created. The scientific approach needs a creative, intuitive counterpart and vice versa; to influence each other, as a knowledge exchange creates a dynamic. This allows new inventions to flourish.

German poet Rainer Maria Rilke ones wrote in one of his works about the idea of combining the intuitive approach and the rational thinking. He compared the rational thinking with catching a self-thrown ball and the intuition as a catch in the innermost of an individual, thrown by someone else (Rilke 1922)\(^7\). This catch is of great importance as it is not a consequence of rational thinking but an intuitive action followed by a rational reaction. And only in this combination of intuition and rational thinking this catch is worth a fortune and allows a dynamic. But as Rilke (1922) corrects, it is not only for the catcher, but for the whole world (Shedrake 2010). Therefore it can be concluded that combining rational-logical thinking with intuition is the only way to combine everything with each other (Shedrake 2010), in order to be able to create a flourishing interacting dynamic.

---

\(^7\)Complete poem by Rainer Maria Rilke (1922) can be found in Appendix I, p.13
Focusing on these main aspects of rational thinking and intuition, a new development starts to grow, which is fed by the idea of creating a balanced interaction of intuition and rational thinking. The concept translates unknown structures of the virtual world into accessible patterns to give an easier approach towards the unknown. Creative approaches, like the picture by Loci (Fig.5), serve as inspiration for liquid and adaptable material explorations (Fig.6). Starting with fluid structures, the line of materials ranges from indefinable patterns to sharply shaped constructions.

This fun and intuitive proposition, is also obtained in the choice of colors. Bright and clear shades of lights relate to the idea of clarity that should be created, while soft off-tone pastels relate to the diffusion of these unknown formations of the virtual world. This contrast is also visible in the material forecast. Intuitive scribble prints are overlaid by geometric flock prints, and straight lines of latex prompt a stretched Lycra to retract in random waves (see picture 6). This straightforward translation allows a creation of consumer accessible goods, which trigger the interest towards the mentioned possibilities of this sub-trend, used as entrance to towards a deeper and broader implementation of this concepts core idea of following the intuition.

**ADORNMENT:** the integration of a new definition of identity

Being part of this partially unperceivable cyberculture the question arises how the personal identity can be redefined (Le Breton 2009). The difficulty to identify a person in the virtual world shows the risk of how far technology can go. Detached from the physical body the travelers within this World Wide Web can take on every possible identity, not being defined by age, gender or nationality but rather by social interests (Le Breton, 2009). The identity known as an individual characteristic is making space for a collection of different information, gathered in the virtual world, creating a puzzle.

---

8 Cyberculture: refers to the cultures of virtual communities and emerges from the use of computer networks and is also referring to happenings associated with the internet.
of identity that relate to interests and favors (Le Breton 2009). This new puzzled and visualized identity, allows speculations about a possible new definition. Still being present in reality the person can change identity within the cyberspace. Addressing this possible new definition of identity, the interest is torn to a portrayal of how this collage of a new identity could look like. Mixing the real image of a person with an assortment of gatherings from the cyberspace, like exemplified in picture by artist Damien Blottiere (Fig.7,2011), creates a new image of a personality.

Inspired by the puzzled depicturing of this new definition, the concept creates a collection of prints and materials relating to this new identity. This collection of prints ranges from photo-collaged placement prints to small microscopic overall prints. The ingredients for these collages are based on the merge of human biology and technology and include limbs of the human body as well as micro-electronic structures. This way of collaging is also applied in the range of textiles. Microscopic structures are for example embroidered with junky interlinking shapes (Fig.8,2014). Shapes and patterns draw inspiration from the heritage and represented in jacks and Jacquards. This derives from the idea that this new identity is based on what is known. Creating new futuristic shapes by using known structures eases the approach towards the acceptance of this new identity. Regarding this new definition of identity in the context of the broad development towards a tech-enhanced society, this sub-concept outlines the development towards an integration of a new definition of identity already starting in today's society of 2014.
**IMPRINTED MYSTICISM:** a fairytale about the future imprint

Predicting the future aligns, as mentioned in the description of Cyber Naturalism in the beginning, with the thought of a wishful thinking about a world in perfect harmony and balance. The primary aspect of intuition, mentioned in the chapter of 'Natural Data', and defined as the only solution to combine human biology and technology in balance, underpins the inner strive towards this fairytale like outcome. Therefore an optimistic but also realistic view is the key to make a positive future imprint\(^9\) possible. As N. Katherine Hayles, a post modern critic wrote, it is the wish to create a dream and not a nightmare. This dream symbolizes a world with citizens that "embrace the possibilities of information technologies without being seduced by fantasies of unlimited power [...]" (Hayles 2009).

From this thought of the future imprint, a development arises that concentrates on a futuristic sustainability. Opposing natural materials to remains of manmade fibres, intrigues the question of what should and should not be left behind for future generations. Fashion is a successful medium to remind todays, 2014's society of the beauty of nature and its important presence in the future. Imprinting this relevance into the society's memory by means of creating fairytale like reminders, it will not slide into obscurity. Narrative interpretations of natural elements, like plant structures (Fig. 9 2014) underpin the extend of how much nature is interlaced with the human existence and how vital it is to preserve it. Opposed to this, man-made and non-biodegradable materials, immersed in a layer of latex, relate to the danger of pollution by beneath notice of the impact of today's and future decisions about materials. This opposition of natural and man-made carried on in the material colorcard. Frivolous luminescent shades are for instance accompanied by dry and earthy greys, while shiny tones of mint align with off-tone greens.

---

\(^9\) Imprint: What we leave behind. In combination with future, it describes what this future generation is going to leave behind.
Fragile Appreciation: the acceptance of the vulnerability of the human body

To achieve a dream-like future the biological possibilities of the human body have not to be forgotten. Adaptations will take place and the integration of technology into our body starts to develop. To allow this integration the first step is to accept its fragility. Being vulnerable, like illustrated in the photography by Igor Klepnevdepi, (Fig.10, n.d.), and dotted with pores, to allow the living of human cells, the skin is a delicate susceptible layer covering the body and creating a soft shelter. With a continuous growth of harmful radiations in the environment the skin becomes endangered (Kunze &Rauner 2013). By appreciating this fragility, the anxiety slowly evolves into a development of rebelling with optimism.

This new development derives from the idea of accepting the fragility and processes into a development of preservation and shelter. It is a reaction on the uncertainty of what might come but leads into a soft rebellion of optimism.

This optimism is translated into blooming surfaces and abstractions of the skins own surface, revealing the beauty of this special body part. Accompanied by soft protective shields to protect the fragility, this combination gives rise to flowery patterned surfaces which are covered by soft, protective layers. These layers can appear in different densities and structures according to their use or environment. Soft semi-transparent but hairy knits give a subtle shelter, while ornamented chunky structures focus on a literal translation of protection. The idea of rebellion is translated in prickling, delicate structures (Fig.11, 2014), that excite the skin’s perceptiveness and underpin the idea that there is no need to shout to be heard as sometimes the best way to be heard is to remain in silence. Also the color card is based on this statement. Light and airy pastels create an image of overcharged optimism. The subtleness of the differences between the tone-in tone pastel colors like, white, soft pink and lavender create an image of quiet and peace.
THE NEW SKIN: the possibility of a new intelligent surface

With pinpointing the awareness of the fragility of the body, arises the interest in future possibilities of skin-like structures. Inspired by the introduction of the haptic sleeve called TaSST\(^{10}\), created by the research group around Aduen Darriba Frederiks, this concept focuses on the development of intelligent surfaces. Taking this project, depicted by Gijs Huisman (Fig. 12, 2012), who is part of the project team, as a starting point, a future concept develops that predicts possible tactile surfaces. Merging the idea of these intelligent surfaces and the development of long-distance touch create an indication of how biology and technology could be balanced in the future of 2030. Distinguishing possible surface structures and patterns allow a clearer imagination of this specific matter, giving rise to ideas of how to integrate it into the daily life.

Integrated technology allows an interaction via long distance and intelligent coatings create a self-healing surface which interacts with its surrounding. This new imagined skin can be integrated in our surroundings or covering our body. It contains inbuilt protective features which can appear in various shapes. Sensors can be spread over the layer in form of beaded embellishment, while rubber coatings offer protection against scratches (Vita-More 2013). Adaptable surfaces react on changes in the surrounding and communicate deficiencies and equilibriums by changing surfaces. Analyzing this futuristic idea of a new skin, this concept focuses on possible surface structures and applications. Beaded patterns, like in Figure thirteen (2014), show the possibility of the integration of sensors, while rubbery coatings create a base for self-healing structures. Combining this idea with structural shapes inspired by the body build-up, three-dimensional structures derive. These can then be applied on the skin as well as in the surrounding, for instance as chairs or covers of suitcases. This concept also involves a own interpretation of how intelligent surfaces could look and feel like. Integrating the prototyping of touch-sensors, also applied in the TaSSt sleeve, allow the exploration of the influence of these surfaces on

\(^{10}\) Tactile Sleeve for Social Touch: This pair of sleeves consists of two components: a sensor to catch the signal at one persons arm and a receiver that translates the signal into a sequence of vibrations. It allows people to have a more dimensional conversation although being parted in space (Huisman, Heylen and Darriba Frederiks, n.d.)
the perception of the incoming stimulus. The color range of this concept is influenced by the cleanliness sterility of technology, resulting in pure whites and a bright red. In addition the inside of our body construction brings forth a collection of earthy tones with surfaces which range from sandy to sleek textures.

**CONCLUSION: The importance of fashion**

Remarking the extent of the technological influence of today, it is of great importance that also the creative industry and especially the fashion business engages in the integration of technology. In today’s 2014 society, the blurring of the boundaries of organic bodies and technological creations is still approached with skepticism and therefore demands a careful introduction towards this uneasy topic. Being a conceptual fashion designer opens up the possibility to make a personal impact on the future development using lighthearted but thought-provoking statements and impressions. This idea creates a drive to communicate the influential developments in a personal vision to trigger today’s society to dive into this trend and its sub-developments to access and start imagination this proposal of 'Cyber Naturalism'.

Using this influence of fashion design to display the topic in a division of six creative and narrative components, it eases the accessibility of this complex prediction. Although being autonomous they influence each other, all contributing to the development in their unique way. The recapturing of the past is as important as making the unknown visible due to intuitive patterns. Translating the importance of the future sustainability into a storytelling reminder keeps the awareness on this essential element to balance the use of biology and technology in the future. Furthermore the human body has to be a focus point of our future-orientated thinking. Redefining our identity initiates a critical thinking about the virtual world, while the acknowledgment of the fragility of the biological body provokes a sheltering reaction as well as an optimistic revolt that opens doors for a new intelligent skin.
REFERENCES

BOOKS


MAGAZINES AND NEWSPAPERS


WEBSITES


DOCUMENTARIES


IMAGES

Fig. 0: Gettyimages, n.d. Goggling beyond Google: How will we be seeing things in the future?. [image] Available at: <http://volta.pacitaprocess.eu/megatrends-in-bioengineering/> [Accessed 19 Apr. 2014].


Fig. 2: Volta, 2013. Adapted, famous Escher picture of the two hands symbolizing the merge of biology and technology. [image] Available at: <http://volta.pacitaprocess.eu/megatrends-in-bioengineering/> [Accessed 10 Apr. 2014].

Fig. 3: Boyle, S., n.d. Ceramics by Shary Boyle. [image] Available at: <http://www.artnau.com/2012/05/shary-boyle/> [Accessed 15 Apr. 2014].

Fig. 4: Flinspach, K., 2014. Ceramic Experiment. [own image].


Fig. 6: Flinspach, K., 2014. Textile experiment. [own image].


Fig. 8: Flinspach, K., 2014. Textile experiment. [own image].

Fig. 9: Flinspach, K., 2014. Pressed savoy leaf. [own image].


Fig. 11: Flinspach, K., 2014. Prickling silicon coating. [own image].


Fig. 13: Flinspach, K., 2014. Beaded. [own image].
Poem about Intuition by Rainer Maria Rilke (1922):

Solang du Selbstgeworfnes fängst, ist alles
Geschicklichkeit und läßlicher Gewinn -;
erst wenn du plötzlich Fänger wirst des Balles,
den eine ewige Mit-Spielerin
dir zuwarf, deiner Mitte, in genau
gekonntem Schwung, in einem jener Bögen
aus Gottes großem Brücken-Bau:
erst dann ist Fangen-Können ein Vermögen, -
nicht deines, einer Welt. Und wenn du gar
zurückzuwerfen Kraft und Mut besäßest,
nein, wunderbarer: Mut und Kraft vergäßest
und schon geworfen hättest.... (wie das Jahr
die Vögel wirft, die Wandervogelschwärme,
die eine ältere einer jungen Wärme
hinüberschleudert über Meere -) erst
in diesem Wagnis spielst du gültig mit.
Erleichterst dir den Wurf nicht mehr; erschwerst
dir ihn nicht mehr. Aus deinen Händen tritt
das Meteor und rast in seine Räume....

From: Die Gedichte 1922 bis 1926 (Muzot, 31. Januar 1922)