

UNRULY DESIGN PRACTICE. PORCELAIN PHONES AND LAMPSHADE FIREPLACES

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ABSTRACT

In this paper the application of the 'rules of unruly design' are explored in demand driven design practice. The rules of unruly design are a set of design rules that were derived from design history to form an inspirational tool for the design and styling of meaningful objects in a postmodern context. Traditionally, the design of the new, the strange and the weird and wonderful is largely the domain of the artistically oriented author driven design practice. The rules of unruly design are an attempt to transfer some of their accomplishments to the demand driven practice of industrial design engineers.

The rules were explored in two master students graduation projects. From the results of the projects one can conclude that the set of rules stimulates creativity in the development of concepts of form and use, and acts as a brainstorm tool for the synthesis of new objects and object types.

Keywords: Unruly design, Design history, Design practice, Aesthetics, Meaning.

INTRODUCTION

In today's postmodern society of images and abundance, products are often defined by their communication function, rather than their use function. In other words; people buy products because of what they mean, rather than because of what they can (Figure 1). This paper shows how the application of so-called "unruly design rules" can support the implementation of meaningful messages in the appearance of design works within this context. In order to do so, the application of the rules was explored within two master student graduation

projects and the results were tested with two short respondent surveys.



Figure 1. Advertisement for a Motorola Mobile phone; the image sells a fashion statement instead of a product with functionality (by D'Adda, Lorenzini, Vigorelli, BDDO (Milan) [2006])

BACKGROUND

The student projects were part of a research into the history of unruly design, which aims at finding theoretical background for the design of everyday things in a postmodern society (Eggink, 2009). Unruly design is defined in this research as: *all objects that are designed with the intention to undermine the existing design-paradigm of the functionalists.* (Eggink, 2011a, p.57). This is interesting because after the final decline of modernism in the 1980's the



Figure 2. Unruly designs from different decades show the same design approach: combining things that do not match provokes meaning. The two different sides of the remaining objects act as commentary on each other (Eggink, 2010). From left to right: “La Brouette” [1937] by surrealist Oscar Dominguez; “Metamorfosi” [1988] by postmodernist Franco Raggi and “Fragile Bottles” [2000] by conceptual designer Hella Jongerius.

motto for unruly designing became “anything goes” (after Paul Feyerabend: 'the only principle which does not inhibit progress is anything goes' (Feyerabend, 1975)). Which of course does not provide much footing for an objective approach to design and styling.

Common research about design history on this subject focuses mostly on the role of design meaning, especially the implications of postmodern design and their successors on a contemporary society dominated by images (Fallan, 2010). However, when comparing postmodern- and conceptual designs over the decades from a design *method* perspective, it seems that there is just a limited set of design principles (and practices) that stands at the base of almost all of this unruly design. So despite their unruliness, from a design method perspective, most of the researched designs are very alike. Although these designs look very different, on a higher level of abstraction, the idea that they incorporate is fairly the same: through a combination of things that do not match, meaning is attached to the objects (Figure 2). This research thus presents a particular part of design history as a means of how to implement postmodern meaning into designs. The resulting limited set of design principles consists of five “unruly design rules” that could be interpreted as design practices (Eggink, 2011b).

This paper will focus on the next step: the application of the design rules in the industry-oriented demand driven design practice, since most of the unruly design examples originate from the artistically oriented author driven design practice (Eggink, 2009). This is done by discussing two graduation design projects of master

students of Industrial Design Engineering, where the rules were applied and evaluated within a design process. The paper describes the set-up of the two projects, shows the results of the design tasks and discusses the evaluation of the application of the rules.

FIVE DESIGN RULES

In short, the five design rules are: combine different interest domains; use inspiration from popular culture; incorporate form-complexity; make use of ready-mades, and; make use of uncommon material (Eggink, 2011a).

COMBINE DIFFERENT INTEREST DOMAINS

The first rule means that two sources of inspiration are used to tell something about the object. The *Tawaraya* bed design by Masonori Umeda, for instance, combined interior design with the sports-domain to make a comment on the significance of the domestic appliance (Figure 3).



Figure 3. Postmodernist designer Masonori Umeda combined “sports” and “interior design” in his “Tawaraya” bed [1981] for the Memphis collection.

The transformed boxing ring provides a cosy shielded space for sleeping, but on the other side emphasizes the idea of marital problems through the association with fighting. Another example is the combination of “luxury” and “farmside” in the *Brouette* seating-object by Oscar Dominguez of figure 2.

USE INSPIRATION FROM POPULAR CULTURE

The second rule is related to the first rule and should be ascribed to the publication of *Learning from Las Vegas* by Robert Venturi, Denise Scott-brown and Steven Izenour in 1972 (Venturi, Scott-Brown & Izenour, 1977). Their plea for the incorporation of images from popular culture, in order to communicate with the crowd was made salonfähig by the Italian postmodernists in the early '80s (Bürdek, 1996, p.228) and inspired a lot of designers to use icons of popular culture and even objects from the designers' own personal interest ever since (Lloyd & Snelders, 2001) (Figure 4 and 5).



Figure 4. The “Garriris” chair [1988] refers to the background of designer Javier Mariscal as a comic-strip author.



Figure 5. Peter van der Jagt's interpretation of a DIY battery drill [1993] is inspired by a science fiction toy.

INCORPORATE FORM-COMPLEXITY

The third rule means mostly a reaction on the reticent, geometrical form-language of the modernists. When executed well, the complexity also adds up to the internal functionality of the object. A nice example is

the *Heatwave* radiator by Joris Laarman (Figure 6). The baroque shapes of the object refer to Parisian decorated balconies *and* provide functional surface area for a proper heat-transmission.



Figure 6. The “Heatwave” radiator [2003] by Joris Laarman: form-complexity that provides functionality.

MAKE USE OF READY-MADES & MAKE USE OF UNCOMMON MATERIAL

The fourth and fifth rule are also rather straightforward. The ready-mades are of course inspired by the Surrealists, with Marcel Duchamp being the first to use existing objects as genuine artworks (Pfeiffer et al., 2011). Interesting with regard to product design is again the combination of meaning making and functional attributes that is for instance visible in the *Wagenheberregal*, an adjustable side-board constructed from screw-jacks and the Bottoms-up doorbell that makes his sound with genuine Bohemian crystal glasses (Figure 7).

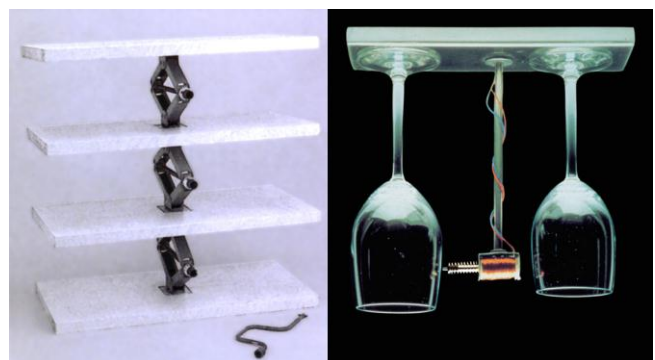


Figure 7. Ready-mades: “Wagenheberregal” by Wolfgang Laubersheimer [1986] and a doorbell made of wine-glasses by Peter van der Jagt [1993].

The use of the uncommon materials in a record-player by German based company Thorens (Figure 8) was inspired by the famous *Concrete Stereo* by Ron Arad, designed in 1985. As the design of Ron Arad was an aesthetic reaction on the common black-box design of

consumer electronics of the 1980s (Huygen, 1989, p.129), the material use in the design of Andre Riemens also has a functional component; the heaviness and high energy absorption ratio of the concrete, provide excellent stability for the turntable (Bürdek, 1996, p.224).



Figure 8. Uncommon material use in a Thorens "Concrete" record player by Andre Riemens [1987].

CONNECTING NOVELTY AND TYPICALITY

The five unruly rules have in common that they lead to objects that present familiar cultural references in an unfamiliar context. Hence their unruliness; the objects tend to stand off from the crowd. That this concept is a strong catalyst for meaning-making is best illustrated by the joint concept of typicality and novelty.

In their illustrative research on typicality, novelty and aesthetic preference, Hekkert, Snelders and van Wieringen (Hekkert, Snelders & Wieringen, 2003) conclude that people have aesthetic preference for objects that are both typical and novel. They couple this combined preference with at the famous motto of Raymond Loewy: 'In sum, it seems that our results provide an empirical basis for the industrial design principle coined MAYA by Raymond Loewy (2002), MAYA being an acronym for Most Advanced Yet Acceptable. In order to create a successful design, the designer should strike a balance between novelty and typicality in trying to be as innovative as possible while preserving, as much as possible, the typicality of the design. The fact that this is feasible is due to the fact that the correlation between novelty and typicality, although highly negative, falls short from being perfect.' (Hekkert et al., 2003, p.122). In fact, the interpretation by Hekkert et al. turns the MAYA principle into a very useful tool. The transformation of terms puts an end to the endless discussions on whether an advanced design is still acceptable or too advanced, because now a new design should be both advanced [novel] and acceptable [typical].

This is of course only possible when typicality and novelty are considered two different variables, and not each other's opposites. This is best understood when the opposite of typical is seen as different, and the opposite of novel is seen as expected. The red "Ericophone" in figure 9 is then an example of a telephone design where both typicality and novelty score high. Novel because of the upright position of the handset (with the dial at the bottom of the base) and typical because of the familiar shape and form-language of the handset, that is copied from the traditional black model.

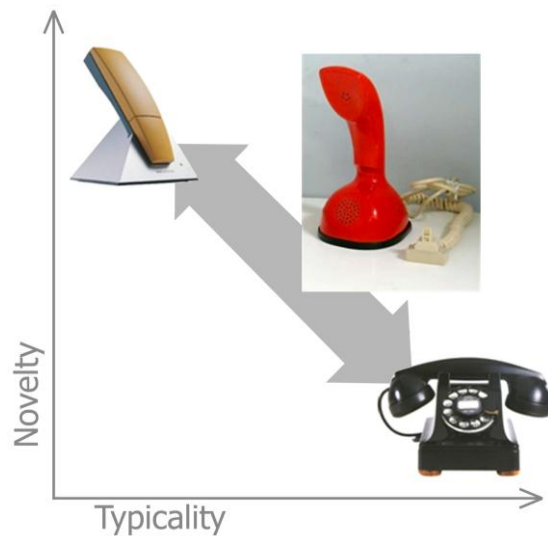


Figure 9. Example of the relationship between novelty and typicality in telephone designs. The grey arrow depicts the (common) highly negative correlation.

By setting known products in a new context, the familiarity of the cultural reference provides the typicality and the new context provides the novelty factor. In the case of the doorbell in figure 6, the wineglasses are recognized for their ability to make sound when you hit them with a spoon to ask for attention. At the same time the new context created by Peter van der Jagt makes that the glasses are not glasses anymore; they become "bells". This novel application of the glasses results in an object, where the primary function is sacrificed for the ability to communicate an idea. Mildred Constantine and Arthur Drexler already stated: 'The emotional content we associate with any object depends on more than the object alone. Hidden associations may be revealed when one object is related to another, or otherwise taken out of its familiar context, or when even a single detail is removed or altered. If the resulting visual metaphor is sufficiently powerful, even the most

ubiquitous artifact may be transformed into an object of emotional rather than practical utility'. (Constantine & Drexler, 1966, p.6).

So one can consider the five rules as a toolkit to support the design of meaningful objects in a postmodern society. But does that work?

APPLYING THE RULES IN PRACTICE

To find out more about the use of the rules of unruly design in real design projects, two master assignments were issued. In the first master project Sander Sloot applied the five different design rules in the design of one subject (Sloot, 2010). In the second master project Jan Willem Peters applied one unruly rule to six different design tasks (Peters, 2010).

ONE TASK AND FIVE RULES

In the project of Sander Sloot, all five design rules were used to create a meaningful design for a mobile phone. A mobile phone was chosen as a design case because the product category as a whole was in the segmentation phase of the evolutionary product development model of Eger (Eger & Drukker, 2010). In this phase the styling features dominate the product's meaning for the consumer, instead of functionality features. This is also in line with the intention of the unruly rules project as is depicted in the introduction: to guide the design process while styling products in a postmodern society, when the image is more important than the product.

RESULTS STUDENT 1

The project resulted in a lot of design sketches, from which several ideas were chosen to develop into more elaborate concepts. From all the concepts, two designs were chosen to visualize more realistic and present to a sample of respondents in a survey.

RULE ONE; COMBINING DIFFERENT INTEREST DOMAINS.

With this rule it is important to choose a meaningful domain to combine with. In figure 10, a lot of design sketches are depicted that were formed using the domain "nature". Because the domain was very broad, the student especially focused on dynamics and

transformations. Although one can say that the designs are all very unruly, it is hard to find a concept that 'makes sense'.

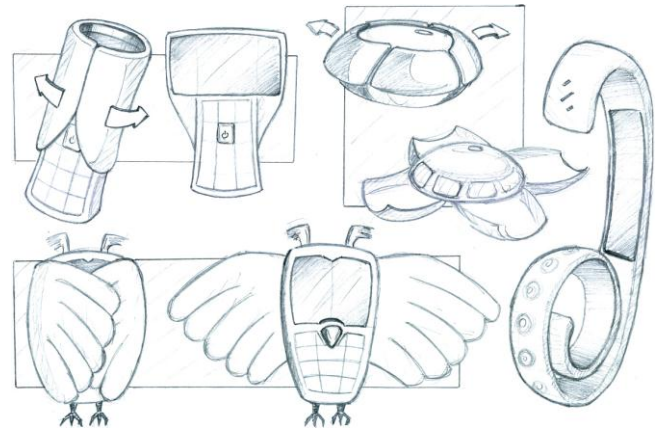


Figure 10. Design sketches using rule one, combining different interest domains. The phone is combined with "dynamics of nature".

Only when the characteristics of specific inspiration sources from the domain were coupled with the functions of the mobile phone, the designs became more meaningful. For instance in the concept shown in figure 11. Providing power for the mobile phone with the use of solar cells is coupled with the characteristics of leaves, providing energy for plants. The visual metaphor is even enhanced by the resemblance of the veins of a leaf with the branch-like electronic circuitry of solar cells.

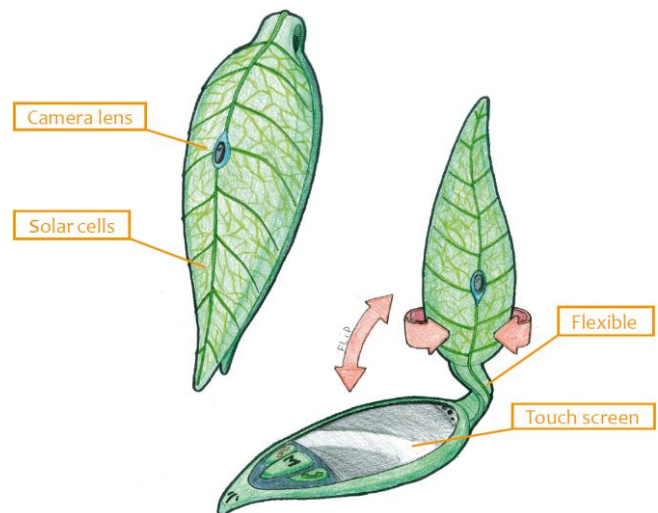


Figure 11. Flexible leaf telephone concept sketch.

To overcome the problem of 'meaningless associations', another possibility for the combination of domains is the use of a more abstract concept that is related to the use of the product. Figure 12 shows concept sketches that were made with the domain "privacy", because privacy can be an issue when the

mobile phone is used in a public space. This resulted, amongst others, in the concept 'monocle' (Figure 13).

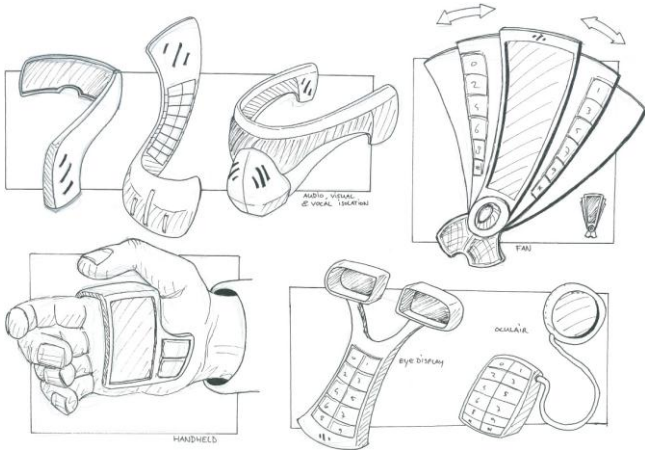


Figure 12. Combination of domains, based on use-aspects; "privacy"



Figure 13. Monocle-concept.

With another use-aspect concept, inspiration from nature led to a shape that emphasizes the lightness of the mobile phone (Figure 15). The feather also refers to a classic way to write messages, but this is rather far-fetched for a phone application.

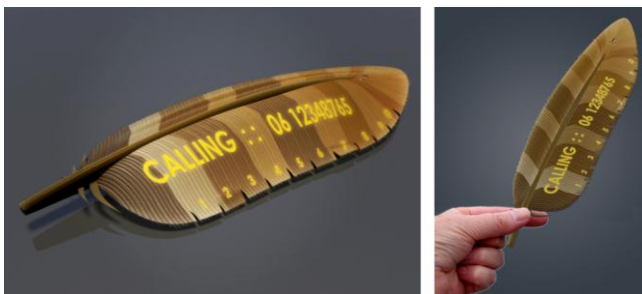


Figure 14. The 'lightweight' feather mobile phone concept.

Instead of the direct use-aspects of the product, the domain can also be chosen with respect to the meaning that the product has, or should have, for the user. For instance when the value or preciousness of

the product should be emphasized, the mobile phone can be associated with "jewelry" as in figure 15.

The latter two ways of combining domains were particularly effective. The student concluded: "In the end the designer has to apply a specific metaphor which suits the functionality and use of the product, in this way the object becomes appropriate to instigate a message or a meaning." (Sloot, 2010, p.83).

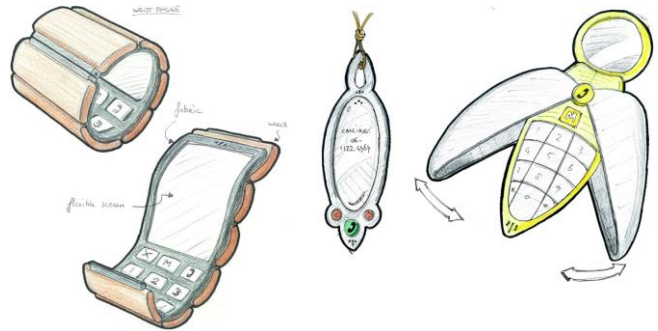


Figure 15. Mobile phone as jewelry: a bracelet, a hanger or a scarf.

One can imagine that this approach is also suitable for targeting specific consumer groups. The jewelry domain metaphor can for instance attract the same target group as the advertisement in figure 1 was aiming for.

RULE TWO; INSPIRATION FROM POPULAR CULTURE

This rule is even more suitable for targeting specific consumer groups. Figure 16 shows a phone concept aiming at fans of Japanese anime culture.

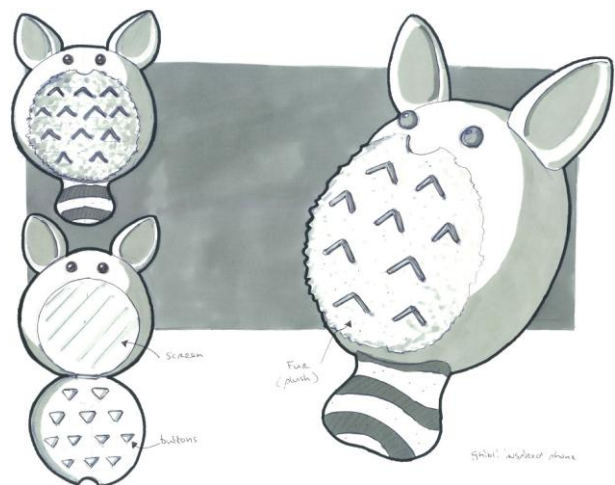


Figure 16. Phone concept based on an anime character

A remarkable observation in the application of this rule to the design task was the role of abstraction. Although with the straightforward application of the

styling of the inspiration source normally one expects to end up with kitsch (Figure 17), with this design task, less abstraction worked better (compare figure 19 and 16).



Figure 17. 'Kitsch' Mickey Mouse Telephone (original patent from 1978 by American Telecommunications Corporation, California)



Figure 18. Inspiration source for the anime telephone concept. The cuddly-ness of the monster character is also used in the design.

However, this only occurred when the shape of the anime character was integrated with the functioning or working of the product. In other words; when the styling features were coupled with 'use-features', as for instance in the keys on the belly of the character.

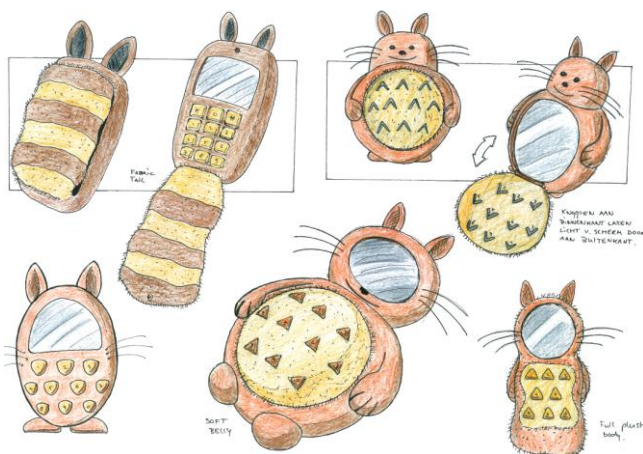


Figure 19. Design sketches for anime telephone.

RULE THREE; INCORPORATE FORM-COMPLEXITY.

This rule was particularly hard to apply in combination with the mobile phone design task. The idea that the complex forms were to add up to the functionality of the product was hard to achieve. Some product ideas were sketched where the complexity was reduced to the concept of decoration. Most interesting idea was

to apply decoration with the use of thermo chromic ink, so as to show only when the phone is touched by the user (Figure 20).

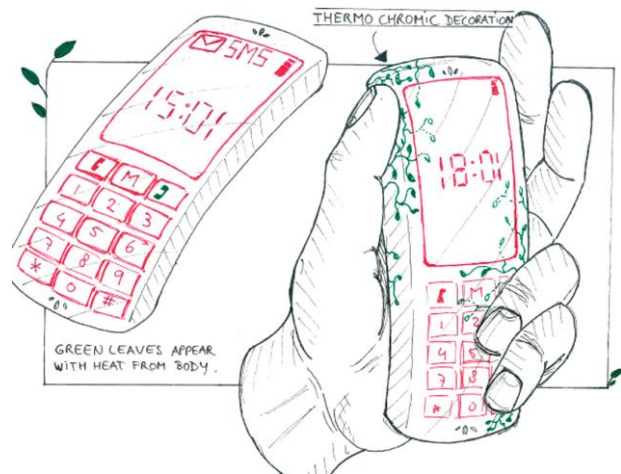


Figure 20. Thermo chromic: a concept with form-complexity as decoration.

But in this way, the complexity is still a form of decoration, and although the decoration is interactive, it is not part of the intrinsic function or structure of the phone.

RULE FOUR; READY-MADES

The use of ready-mades was reported to be hard in this design task, because the functional parts of a mobile phone are all very tiny and electronic. The results thus became very big (figure 21, left) or restricted to one particular aspect of the phone (Figure 21, right).

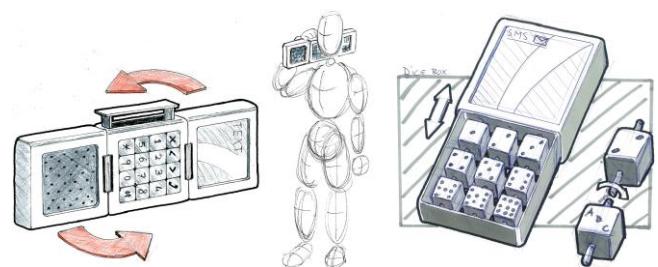


Figure 21. Readymade concepts: a transformed Ghetto blaster and the use of dice as keys.

The most remarkable concept was a mobile phone in a transparent bottle, which of course refers to the bag-radio concept by postmodernist Daniel Weil (McDermott, 1987, p.112), but also is particularly suitable to evoke a very specific message to the consumer by the choice of the bottle. One can even imagine that the consumer can choose the bottle herself, adding a form of co-creation. And when a specific perfume bottle is used, the concept also becomes an object that targets the same female

consumer as the advertising in figure 1 is aiming at (Figure 22).



Figure 22. Ready-made concept; the choice of the bottle determines the meaning of the object.

RULE FIVE; UNCOMMON MATERIAL.

The application of the last rule resulted amongst others in the use of porcelain as the basic material of the telephone housing. Following the theory of novelty and typicality, the shape of the phone concept was kept conservative (Figure 23).



Figure 23. Porcelain telephone concept.

TESTING

The porcelain telephone concept was tested with a panel of respondents, together with the feather concept of figure 15. The concepts were tested on their 'unruliness' and 'attractiveness'. This was done by letting the respondents choose keywords from a list of characteristics that are related to the two terms. The respondents were given the images of the concepts with a short description. Then they were asked to check the keywords that they would find appropriate for the designs. The respondents could choose as much keywords as they liked. The keyword listings were randomized and consisted of both positive and negative qualifications for the two terms, because the unruly design concepts were expected to draw mixed reactions. For example 'unruliness' was associated with such positive qualifications as

'innovative', 'inspiring', 'surprising' and 'daring', and the negative qualifications 'strange', 'unclear' and 'confusing'. 'Attractiveness' was associated with qualifications as; 'beautiful' and 'sensuous', versus 'ugly' and 'awkward'. Thus both positive and negative qualifications ad up to more unruliness. More positive than negative qualifications ad up for attractiveness. Twenty-four qualifications in total were given and the two concepts were rated by respectively 33 (for the porcelain concept) and 35 respondents (for the feather concept), mainly fellow students.

Figure 24 shows the total number of chosen qualifications for the two concepts, divided in positive (green) and negative qualifications (red).

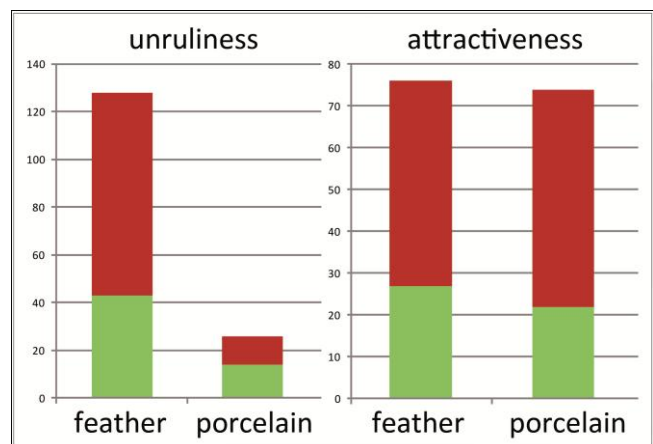


Figure 24. Scores of positive (red) and negative (green) reactions on the phone concepts 'Porcelain' and 'Feather'.

DISCUSSION RESULTS STUDENT 1

Although the concepts were rated more with negative keywords than with positive ones, the concepts act according to the theory. The feather concept that is different in both material, shape and association scores very high on unruliness, while the porcelain concept that is more conservative in its shape and associations scores low. That both concepts score somewhat even on attractiveness is in line with the findings of Hekkert et al. that the MAYA principle is not linear, but two-dimensional (otherwise the more unruly/advanced feather design should also score less on attractiveness), and thus supports the assumption that unruly design 'works' because of the joint concept of novelty and typicality.

The overrepresentation of negative qualifications is an indication that not everybody appreciates unruly products as such. This does not always have to be a

disadvantage, as long as the right target group is kept in mind during the design.

A complication with testing the results further, is the invention and rapid dissemination of the smartphone with touch technology. According to the theory of product phases, with this invention the mobile phone as a product category is no longer in the segmentation phase (Eger, 2007), but starts all over again in the cycle with performance and optimization. Hence that all new mobile phones look the same; like an iPhone. This means also that the concepts designed by Sander Sloot can no longer be tested with respondents for their performance on 'novelty', because from a functional perspective they will all look old-fashioned. Just like cathode-ray tube television sets and audio cassette players do.

ONE RULE AND SIX TASKS

This problem of outdated-ness does not occur within the project of Jan Willem Peters, where one rule – “combine different interest domains” - was tried in six different design tasks. To see whether the rule could function in different circumstances, the design tasks were chosen to be differentiated along two lines: products with frequent and non-frequent interaction and with high and low emotional involvement. High involvement versus low involvement was divided in three categories characterized as “functional products”, “accessories” and a middle category named “functional accessories”. The consumer products that were chosen to represent the six categories were: a wheelchair; a meter box for electrical fuses, a digital piano, a fountain, a fireplace and a tent.

RESULTS STUDENT 2

The concept design for the different categories resulted in a lot of sketches for the respective objects. Some examples are given in figure 25.

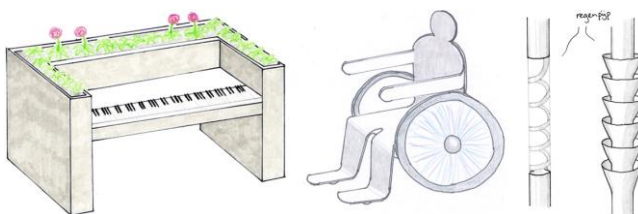


Figure 25. Idea sketches by Jan Willem Peters: a digital piano 'for background music', an 'inviting' wheelchair, and two 'fountains' that are integrated in a rain pipe.

One main problem with the design task was to find a meaningful interest domain for all the categories. Two categories will be discussed in more detail, the tent (functional accessory with non-frequent interaction) and the fire place (functional accessory with frequent interaction).

For the tent, the interest domains to form combinations with, were derived from both the functional and emotional meaning of the tent as an abstract concept. The domains that were used for inspiration were 'shelter', 'temporary' and 'nature' (figure 26).

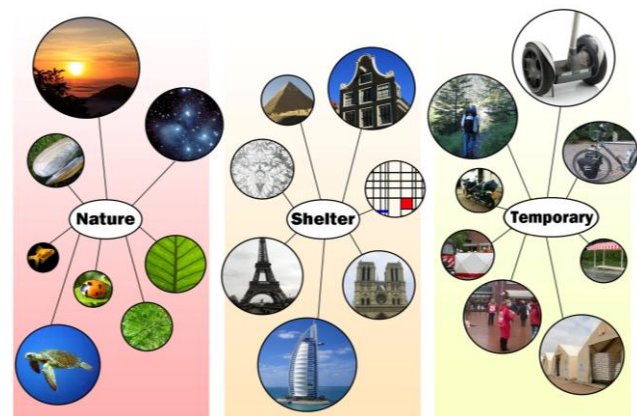


Figure 26. Chosen interest domains to combine with the concept of a tent.

Because the function of a tent is to provide a temporary shelter and the emotional association chosen was that camping at a campsite (or in the woods) is a means to live closer to the natural environment. The interpretation of 'shelter' and 'temporary' resulted in a series of tents that could express your back-ground, interest or status at the campsite (figure 27), for easy social recognition. Note that although the domains were chosen from a functional perspective, the concept has a strong emotional meaning component.

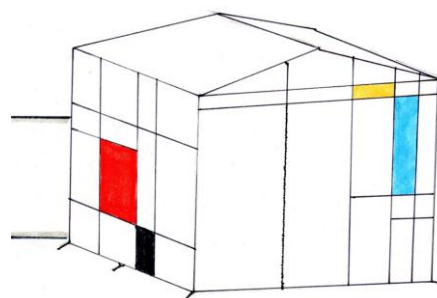


Figure 27. Unruly tent concept: express your social status at the campsite (a tent for older and well-to-do people that prefer to go to art museums)

A remarkable result with the combination of the nature domain was a tent with the shape of a leaf, where the design is particularly interesting because the structural backbone of the tent resembles the veins of the leaf. In this way making not only an association on the emotional level (going to a campsite is a way to be closer with nature). But also making meaning on a functional level.

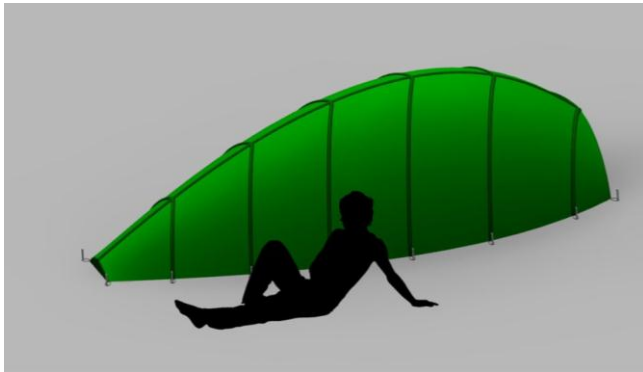


Figure 28. Unruly tent concept 'Nature'. The veins of a leaf shape the structure of the object.

For the fire place design task, the student chose to combine the product with domains that closely related with the context of the original object. Figure 29 shows a design sketch where the fireplace was combined with the domain "interior products". Although the combination of domains is not very unruly ("fireplaces" can even be seen as a subset of "interior products"), the new combination of two original objects does provoke a new meaning in the way it was originally intended. The table-slash-fireplace forms a perfect décor for a romantic dinner date.

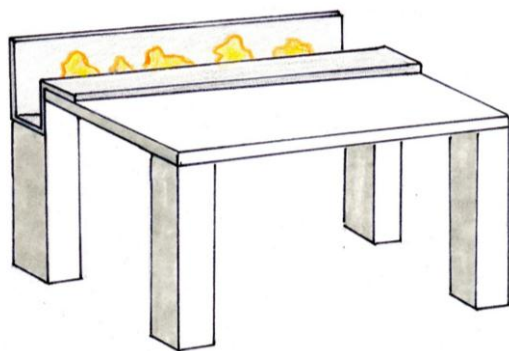


Figure 29. Concept for a fireplace and table combination: the coziness of the fire as a perfect context for a romantic diner.

Another combination from the same domain reference was chosen to visualize more realistic and use in the evaluation of the results: the lampshade (Figure 30). In this concept a gel burner was combined with the shape of a common lamp stand.

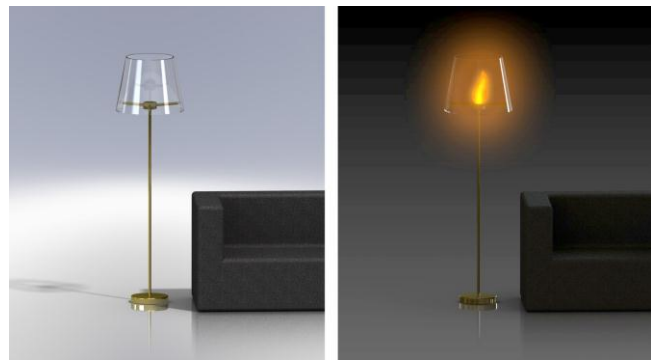


Figure 30. Final fireplace concept "Lampshade".

The lampshade concept was tested in the same respondents survey and with the same procedure as the mobile phone concepts. But as there was no other fire-place concept to compare with, the results were not very satisfying. A new element was added to gather more information about the judgment of the concept: the respondents were 'primed' with a collage of other fireplaces. Half of the 28 respondents were given a set of pictures of traditional fireplaces. The other half was given a set of contemporary fireplaces with a lot of different shapes, in order to influence their idea of a 'typical fireplace'. The respondents had to rate the concept with the same keywords as in the first survey. The totals of the positive and negative scores are displayed in figure 31.

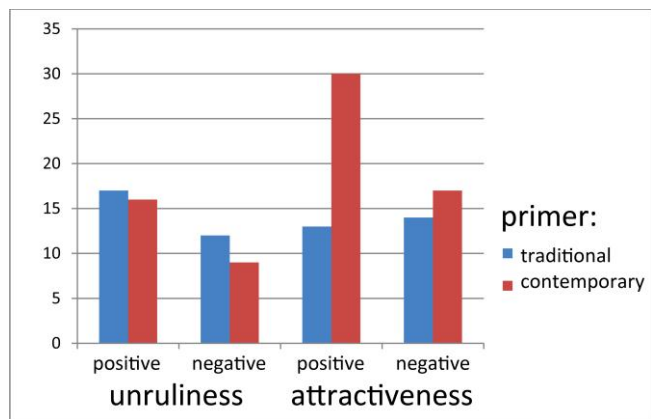


Figure 31. Results of the second test of the lampshade-fireplace.

DISCUSSION RESULTS STUDENT 2

Apparently, the knowledge that the suggested lampshade fireplace was not that "outrageous", made the concept more "acceptable" to the respondents. One can say they were more open to like the concept, although their idea of the "specialness" of the concept stayed the same. This also suggests that unruliness and attractiveness, in line with typicality and novelty, are two separate dimensions. In general it is

remarkable that the judgment of the respondents was influenced so easily. Which is a point for further investigation.

GENERAL DISCUSSION

In the end, the rules are meant to support the designer, so did that work? Both students reported that the rules did support the conception of new ideas. Both also claimed that the rules should be implemented in a broader method, because the rules as such do not provide clues on what message is to communicate, other than being 'unruly'. Jan Willem Peters proposed a method with several steps to determine the right message or associations to work with (Figure 32).

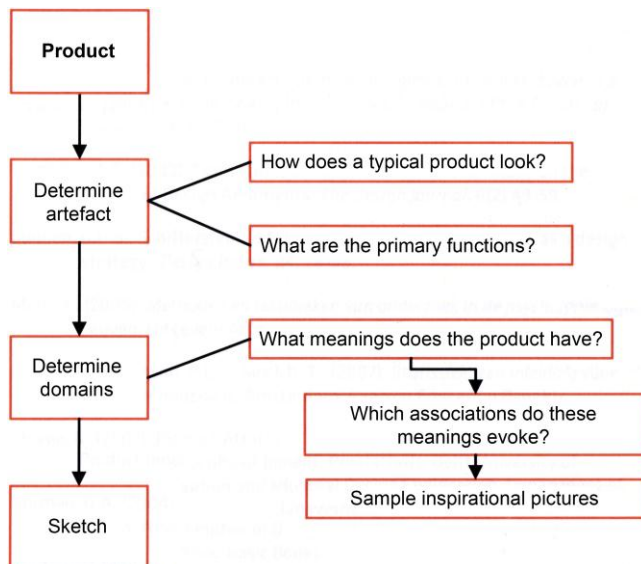


Figure 32. The unruly rule “combine interest domains” extended to form a method (Peters, 2010, p.26)

To combine known meanings (the textbox says: “Which associations do these meanings evoke?”) is not very unruly. However, the solution example in figure 33, following this proposed method, can be called unruly. This is not so much due to the unruly combination of domains, but because of the emphasis on the metaphorical interpretation of the objects’ function. This however opens the discussion on what is precisely a domain? For the application of the rule it seems that it is important that the ‘domain’ represents a set of meanings or associations that can shape the message that the designer wants to convey with his or her designs. This communication only works when the domain is part of the frame of reference of the user or target group.

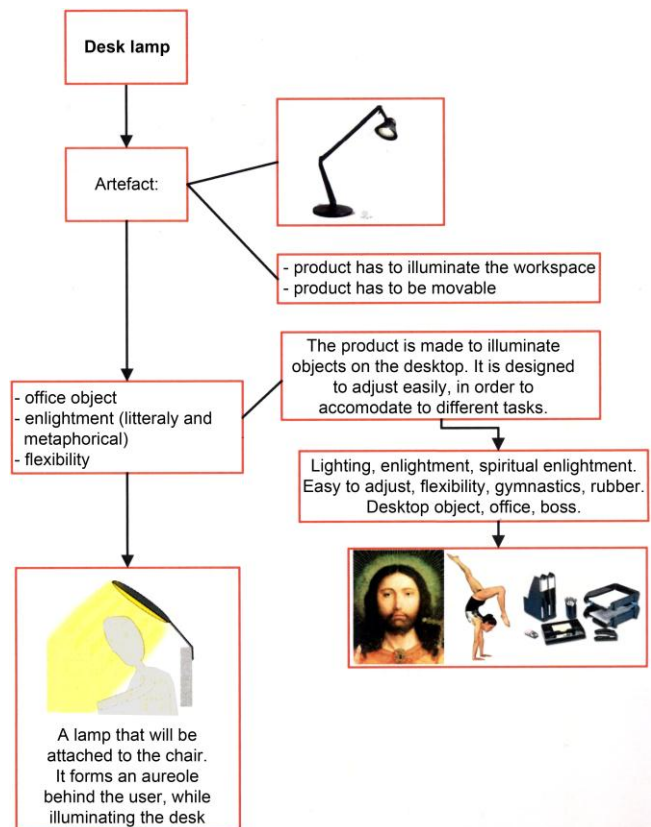


Figure 33. Example of a design process according to the proposed method by Jan Willem Peters (2010, p.26).

Sander Sloot reported that the rules can be used also in the analysis of the design task. For example when the rule is to use *uncommon* material, this automatically implicates one has to think about what the *common* material is. And also why this material is commonly used, and what this means or does not mean to the user of the product.

The two projects showed that the rules can be used in several ways and in different stages in the design process. Which underlines their status as an inspiration tool and makes them flexible to use by different designers and within varying design tasks.

For a good implementation of the rules however, both students reported that it is important to have an idea of the message that has to be communicated, before one starts to apply the rules. Otherwise the resulting concepts just merely ‘stand out from the crowd’ with their unruliness, but tend to stay rather “meaningless”. In this regard it would be interesting to combine the tool with a method that is meant to provide such messages or ideas to communicate, like the VIP approach by Hekkert & van Dijk (2011) which aims at

finding a 'raison d'être' (reason to be) for the product that is to be designed.

In addition to that, a next step would be to repeat the second respondent survey with the specific method used by Hekkert et al. (2003, pp.113-114), in order to check the results on the combination of novelty and typicality. Within the current setup the typicality is not explicitly measured, but is supposed to follow from the familiarity of the chosen associations (like the lampshade) for the concepts. Furthermore, although the comments and findings of the survey can be explained by the joint concept of novelty and typicality, these results are not statistically sound and because the researched terms (unruliness and attractiveness versus novelty and typicality) are also different, the scores and conclusions should be taken carefully.

CONCLUSION

One can conclude that the rules of unruly design support the design of meaningful objects in a postmodern society by stimulating creativity in the styling phase and acting as a brainstorm tool for the synthesis of new objects and object types. The rules form a versatile design tool that was appreciated for its flexibility to adopt to a specific styling task. This flexibility on the other hand causes that the end results are highly influenced by the personality and corresponding intentions of the designer. With a predominant postmodern perspective of the designer, who is willing to make "outrageous" designs (as in the mobile phone project), the rules mainly lead to new unruly product shapes for existing categories. When a more "modernist" perspective of the designer is applied, the rules seem to lead to familiar shapes in new product categories (as in the lampshade fireplace).

In addition to that, the reaction of respondents to the designs can be explained by the joint concept of novelty and typicality. However, more research is needed in order to claim that there is a causal relationship.

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