Knowledge of Use and Acceptability of Typological Innovation: A comparative study

Yoonyee Pahk, UNIST, iyoonee@unist.ac.kr
James Self, UNIST, jaself@unist.ac.kr
Joon Sang Baek, UNIST, joonsbaek@unist.ac.kr

Abstract

Compared to incremental innovation, radical innovation has a higher risk of failure and loss in the market. Within radical innovation, typological product innovation, which deviates from the product's formal archetype, can carry significant risks in terms of product acceptability. This is because typological product innovations have the potential to trigger a strong, immediate emotional response. The current study examines the relationship between knowledge of product use and the acceptability of novel typological product innovations. Card-sorting and open interview questions were employed as means to gather response data related to the acceptability of ten example typological product innovations. A qualitative content analysis identified themes and ideas within responses which were then used as the categories of a coding frame. Frequencies of encoding and qualitative analysis of responses revealed a relationship between knowledge of use and acceptability of typological product innovations. Results indicated the increased influence of functional product aspects upon acceptability once knowledge of use was provided. In contrast, formal aspects are dominant in determining acceptability when knowledge of function and use is unknown or unclear. Implications for the design of typological product innovations are discussed.

Keywords: Product Innovation; Usability; Product Acceptability

Introduction

Concern for innovative product development is growing due to an increasingly competitive product market. As such firms continue to seek breakthroughs in the development of innovative products and services. However, two types of innovation may be identified. Incremental innovation, describing improvements within a current frame and radical innovation which attempt to change the frame itself (D. A. Norman & Verganti, 2014). Therefore, radical innovations depart from the existing product typology in terms of product

meaning compared to incremental innovation. However, the same drive towards radical departures also increases risk of failure and loss in the market (Kuyatt, 2011).

Dell'Era and Verganti (2007) discuss meaning-driven innovation as product novelty related to a new message or design language. The Rampino (2011) pyramid indicates similarities to Verganti's (2009) notion of meaning driven innovation, described as radical changes in how a product is seen and understood (Figure 1). Although typological innovation is positioned at the top of the Rampino (ibid) pyramid (Figure 1), indicating a hierarchical distinction between meaning and typology innovation, both are described as types of infrequent innovation which rarely arise.
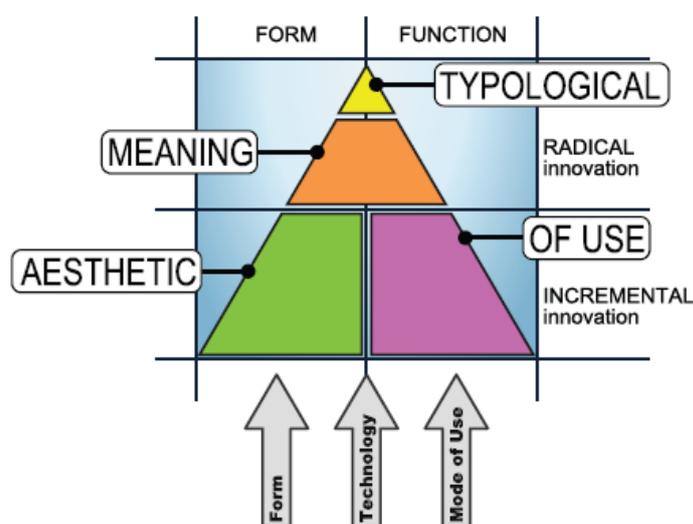
Figure 1 Rampino's (2011) Innovation Pyramid

When encountered, typological product innovation has the potential to trigger a strong immediate emotional response which may be either negative or positive. However, while both meaning and typological innovation requires the reinterpretation of a product's meaning, they also require time to penetrate the market and achieve success (Dell'Era & Verganti, 2007). For the purposes of the current study to examine acceptability of typological product innovations, we define typological innovation as a radical innovation in meaning that significantly breaks from the established product archetype. The current explorative study indicates how knowledge of product use and function provides opportunities to enhance the *acceptability* of typological product innovations.

Novelty and Product Acceptability

Because typological product innovation leverages radical differentiation from the existing product archetype, novelty is a significant influence upon affective response. However, novelty can be both a positive and negative product attribute. Extreme novelty has the potential to cause repulsion, with consumers preferring products similar to their existing understanding of the product archetype within the product category (Bloch, 1995;

Chakrabarti & Khadilkar, 2003). They wish, for example, for a lemon squeezer's form language to reference an existing understanding of what a lemon squeezer should be, or for an electric kettle to function as they may expect given their experience of such product types. On the other hand, novelty may also trigger positive emotions related to unexpected difference (Rindova & Petkova, 2007). This is because a subjective consumer response to the novelty of typological innovation is influenced by personal held beliefs, experiences and culturally driven frames of reference. As such, while the novelty of typological innovation provides opportunities for product differentiation, due to the subjective nature of emotional response, typological innovations also risk the stability of consumer acceptability (Blake, Perloff, & Heslin, 1970). Rampino (2011) emphasises the inability of typological innovation to guarantee commercial success. Rindova and Petkova (2007) go further to conclude consumers encounter considerable difficulties in recognizing the value of truly novel product innovations.

The contradiction between novelty and acceptability in product innovation is expressed by Loewy's MAYA (Most Advanced Yet Acceptable) principle. The dictum, although an oversimplification, points to the dichotomous relationship between product differentiation and acceptability (Krippendorff, 2006). Adopting this principle, successful typological innovations arise from products that, although novel, are designed in a way end-users are able to understand and accept (Snyder, 2007). Rindova and Petkova (2007) describe a relationship between product novelty and acceptability through a taxonomy of the product innovation dimensions aesthetic, symbolic, functional and technological. For example, when radically new technologies are encountered for the first time, a strongly negative response may be triggered through schema incongruity. This incongruity can be resolved when customers identify the correct schema to understand the usefulness of the product's novel attributes. Perceived value is established upon the individual's comprehension of the innovation (Rindova & Petkova, 2007). Likewise, the psychological mechanism of novelty and acceptance can be described as connected to the concept, 'schema' which is knowledge structure formulated by previous experience (Merrill, 2000).

However, as Block and Wulfert (2000) indicate, it is often challenging to arrive at a universal definition of acceptability, much less employ it as a construct to measure response to typological product innovations. This is because the term may be applied to various perspectives and contexts such as product attachment, awareness, tolerance and willingness (Fruzzetti & Iverson, 2004).

As a means to explore the acceptability of typological product innovations before and then after knowledge of use, the current study defines acceptability as a willingness to accept. That is, we use a willingness to have, as opposed to an unwillingness to have, as a construct through which product acceptability may be measured. Willingness is thus employed to indicate acceptability before and after knowledge of use. Finally, we limit the scope of the concepts functionality and use to knowledge of use. Knowledge of use we define as knowledge of prior experience drawn upon to identify and understand a product when first

encountered; cognizing what the product is and what functions it has. Here we use the term not to describe specific knowledge of particular functions but a holistic awareness of product use and function based upon previous experience.

Aims

The current explorative study aims to examine the relationship between knowledge of product use and the acceptability of novel typological product innovations. In doing, this initial investigation aims to address the following research question:

> *RQ: Does knowledge of product use influence acceptability of typological product innovations?*

In addressing the question above we provide evidence to indicate the role knowledge of use plays in the acceptability of highly novel typological product innovation. Finally, we discuss potential implications for the design of typological product innovations.

Methods

Participants

Card-sorting was employed as means to gather participant responses to typological product innovations. Although there is yet to be any agreement upon optimal sample size for the application of card-sorting (Gatsou, Politis, & Zevgolis, 2012), existing studies indicate a sample of eight to twelve participants may be sufficient (Kaufman, 2006; Nurmuliani, Zowghi, & Williams, 2004; Spencer, 2004). Considering this, the current study employs a sample of ten participants from the authors' higher education institution. Each participant was an undergraduate student studying in fields unrelated to design. Each was between the age of 20 and 30 years old, with an average age of 25.6.

Typological Product Innovations

Ten typological product innovations were chosen as stimuli to assess acceptability. We chose examples among the products which were acknowledged as 'novel' by people regardless of commercial success. The common feature of all examples was their deviation from typical product form. Product 1 (Mandarine, Allesi) was taken from case studies of radical innovations by Verganti (2009); examples 2 (USB hub, LaCie), 3 (Sacco Armchair, Zanotta) and 4 (CD player, Muji) were derived from Rampino's (2011) examples of typological innovation. Product examples 5 (Humidifier, ±0), 7 (Serene Mobile phone, Bang&Olufsen), 8 (Mac Pro, Apple) and 10 (Cirrus 7, Nimbus) indicated novelty and innovativeness through prestigious awards (Ramirez). Product 5 (Humidifier, ±0) won a gold prize of the Good Design Awards 2005; 7 (Serene Mobile phone, Bang&Olufsen) achieved the ProtectStar® Mobile Security AWARD 2006; 8 (Mac Pro, Apple) won best of best Red Dot Product design Award 2014. Product example 10 (Cirrus 7, Nimbus) won winner Red Dot

Product design Award 2014. Products 6 (Hockey Puck Mouse, Apple) and 9 (G4 Cube, Apple) were not successful in the market but still considered iconic in terms of their novelty. Product 6 (Hockey Puck Mouse, Apple) is an iconic Apple mouse with its excessive uniqueness but acknowledged as revolutionary design(Zhang, 2008), and 9 (G4 Cube, Apple) is displayed in Modern Museum of Art in New York (MOMA) as example of innovative design (Merholz, Wilkens, Schauer, & Verba, 2008). Figure 2 provides illustrative images of the 10 example typological product innovations.

Figure 2 Ten typological innovation images

Procedure

Card sorting as a research tool is often utilized in the areas of information architecture, cognitive psychology and cognitive anthropology to examine mental models of how individuals organize information (Chaparro, Hinkle, & Riley, 2008). The card-sorting technique is also effective in drawing out participant activity in that the technique is a game-like procedure (Muller, 2001). As the current study aimed to compare the two conditions *with knowledge of use* and *without knowledge of use* in terms of acceptability of typological product innovations, card-sorting was considered an effective means of data collection in that it provided opportunities to track change in acceptability between the two conditions.

Interviews with card sorting exercises consisted of a without knowledge phase and a with knowledge phase. Figure 3 illustrates the two phase approach to interviews.
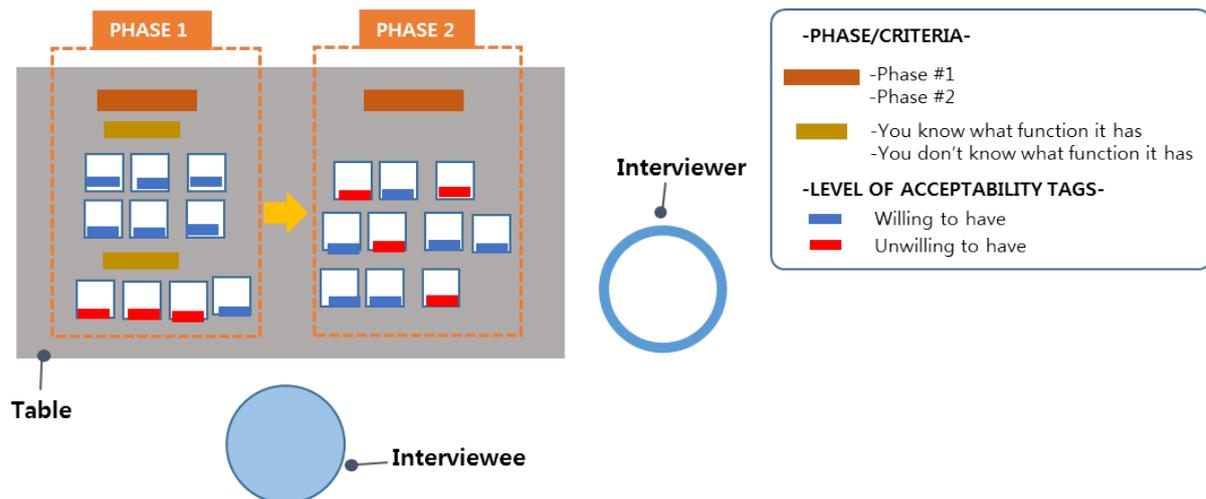
Figure 3 Interview process

At the start of each session, participants were provided with an explanation of the aims of the study before being asked to sort the images of the ten example products into two categories; one for those products for which they understood the function and use of the product and one for those products that they did not understand. Two sets of tags, "you know what function it has" and "you do not know what function it has" were provided for this exercise. Participants were then requested to indicate their acceptability of each product in turn using the two tags illustrated in Figure 4 (willing to have and unwilling to have).

Figure 4 Two levels of acceptability

After placing a tag on to each of the ten product examples, participants were asked the following three questions for each of the ten products:

1. Could you guess the function this product would have?
2. What made you label the product willing/unwilling to have?
3. Can you explain the actual function of the product?

After responses to the three questions above had been recorded, participants were provided with detailed accounts of the function and use of each product in turn and asked to re-arrange any of the acceptability tags on each of the ten product images if desired. Finally, for each re-arranged acceptability tag, participants were asked the following question:

4. What made you change the tag?
5. What made you change your attitude towards the product?

6. Why is it (the product) more acceptable/ unacceptable to you now?

Through the card-sorting process, responses related to the participants' knowledge of the products' use at the start of the session were gathered, together with indicators of product acceptability before and after knowledge of use.

Analysis

To examine differences between *without knowledge of use* and *with knowledge of use* conditions in terms of product acceptability, interview responses taken from the six questions above were first encoded through the four encoding categories illustrated in Figure 5.
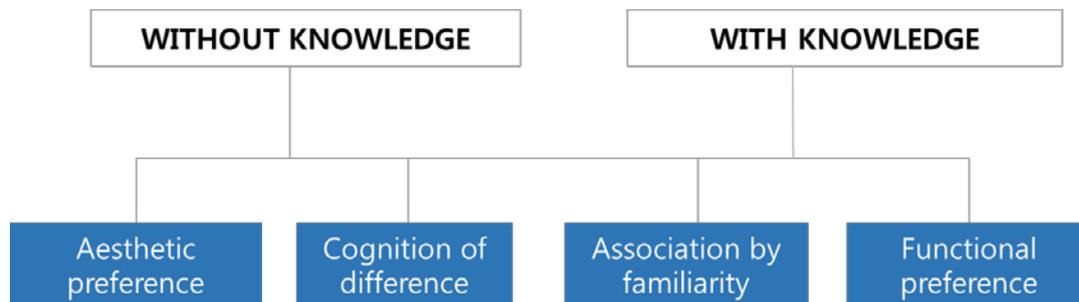
Figure 5 Coding tree of encoding data

The coding frame (Figure 5) was data-driven in that the four categories emerged through the identification of themes and ideas within the data. *Aesthetic preference* emerged as related to personal taste in terms of aesthetics. The category *Cognition of difference* referred to the participants' recognition that the product is novel, being differentiated from others. *Association by familiarity* was identified through responses related to expressions of product familiarity. That is, responses indicated participants were in some way familiar with the products. Finally, *Functional preference* emerged from responses that indicated product preference in terms of usability and function.

Results

Results indicated significant changes in the participants' responses to the ten product examples between phase one (*before knowledge of use*) and phase two (*after knowledge of use*). In the first phase, participants were asked to sort the cards into two categories, 'you know what function it has' and 'you do not know what function it has' to indicate the participants' prior knowledge of the ten product examples. We then asked participants of the function of individual products. 71% of responses incorrectly guessed product function. Figure 6 provides some example responses for two of the product examples 1 (Mandarine, Allesi) and 8 (Mac Pro, Apple).
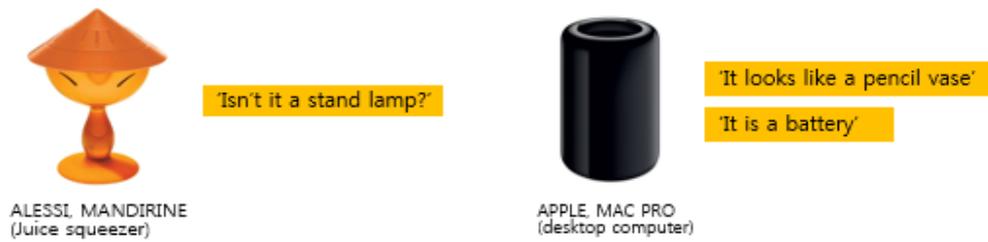
Figure 6 Participant guesses of function

Figure 7 illustrates differences in response to the acceptability of the ten products before and after knowledge of use.
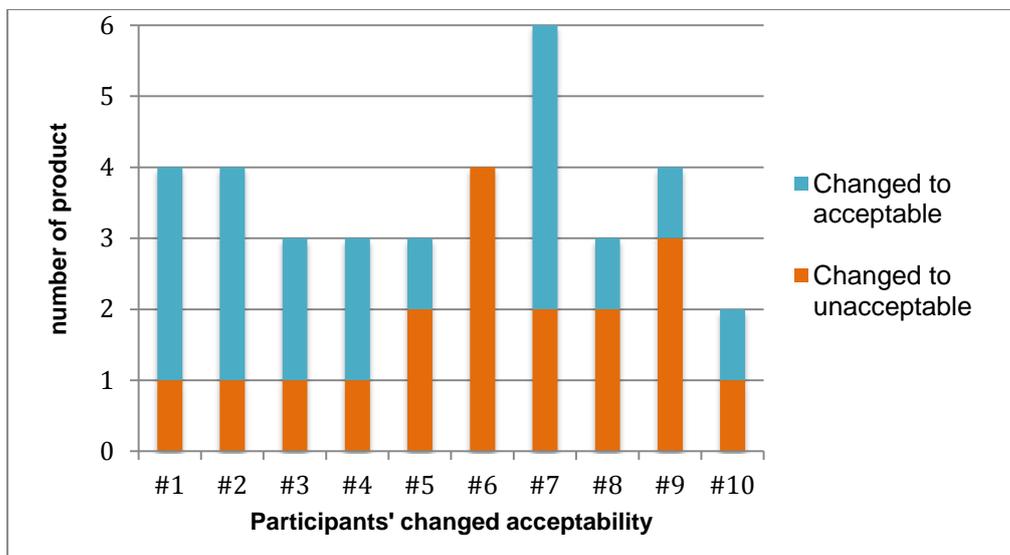
Figure 7 Change in participants' acceptable of 10 products after knowledge of use

In total, 36% of responses related to product acceptability changed after knowledge of use. Some participants (i.e. participant 6, Figure 7) tended towards negative change only after receiving knowledge of use. However, the other nine participants' responses changed both positively and negatively. It was also found that five participants (Figure 7, #1, #2, #3, #4, and #7) changed more products from unacceptable to acceptable after knowledge of use than from acceptable to unacceptable. For the other two participants (Figure 7, #8, #9) the reverse was true; after knowledge of use the participants changed more products from acceptable to unacceptable. This result showed knowledge of product use may have had an influence upon acceptability in terms of the product examples, as indicated by the participants' changed product acceptability labeling. However, no pattern of change was observed. That is, change from acceptable to unacceptable, or unacceptable to acceptable was somewhat equally distributed among the ten participants. Although results indicated knowledge of use did prompt change in participant acceptability, the direction of change appeared dependent upon individual participants.

Comparison of Encoding Catagories

The graph in Figure 8 compares participant responses with knowledge and without knowledge of use across the ten example products through percentage encoding frequencies for each of the four categories of the coding frame. It shows the percentage frequency with which each of the four categories were applied to the encoding of the ten participants' segmented responses between without knowledge of use (Figure 8, grey bars) and with knowledge of use (blue bars).
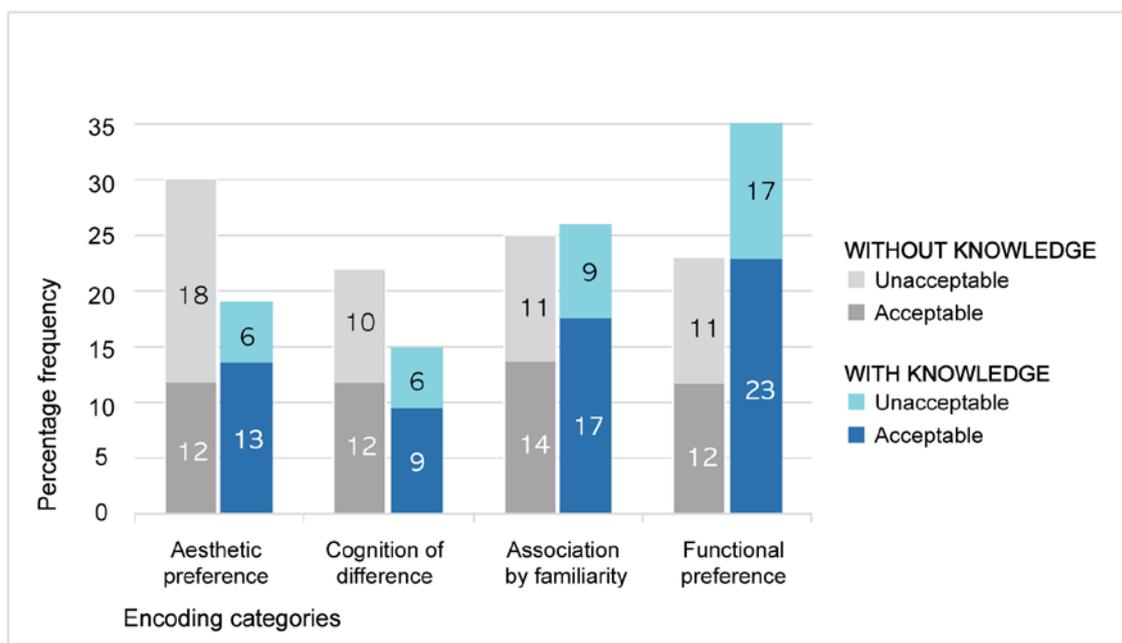
Figure 8 Comparison of encoding frequencies between 'without knowledge' and 'with knowledge' conditions

Frequency of encoding for the category *Aesthetic preference*, indicating the participants' appreciation of product form and aesthetic, was similar for those products participants indicated as acceptable (*without knowledge %f=12, with knowledge %f=13*). In contrast, for product examples participants indicated as unacceptable, encoding frequencies of responses related to aesthetic preference decreased in the with knowledge condition compared to without knowledge (*without knowledge %f=18, with knowledge %f=6*). This indicated a negative appreciation of form and aesthetic for those products labeled unacceptable was compounded by knowledge of product use and function. In contrast, knowledge of use may have had little influence upon aesthetic preference for products participants felt were acceptable.

For Cognition of difference, suggesting participants recognition of novelty within the products, the decrease in frequency of encoding between with and without knowledge conditions was greatest for those products labeled unacceptability (*without knowledge %f=10, with knowledge %f=6*). This indicated recognition of novelty for the product examples may decrease after knowledge of use. As participants were provided

knowledge of use and function, their focus upon the novel qualities of the products appeared to decrease, indicated by lower frequencies of encoding.

For encoding of *Association by familiarity*, related to expressions of product familiarity, encoding frequency decreased for unacceptable products between the two knowledge conditions (*without knowledge %f=11, with knowledge %f=9*), but increased for those products labeled acceptable (*without knowledge %f=14, with knowledge %f=17*). This suggested the participants' feelings of familiarity towards the product examples increased more steeply for those products labeled acceptable. In contrast, familiarity was less effected by knowledge of use for products seen as unacceptable, indicated through reduced encoding for unacceptable product examples

Finally, encoding of *Functional preference* increased for both acceptable and unacceptable products between the two knowledge conditions (*acceptable: without knowledge %f=12, with knowledge %f=23; unacceptable: without knowledge %f=11, with knowledge %f=17*). It appears both acceptable and unacceptable innovative product examples were sensitive to knowledge of use when participants' considered their functional preferences, with encoding frequencies indicating the participants' increased discussion of functional preference after being provided knowledge of use for both acceptable and unacceptable products.

Change in Aesthetic Preference

Encoding of Aesthetic preference showed a difference for those products labeled unacceptable (Figure 8, *without knowledge %f=18, with knowledge %f=6*). Responses encoded as Aesthetic preference often indicated evaluation of form factors such as colour, shape, size and also external factors such as trend or harmony with expected environment. However, in the without knowledge condition, encoded responses also suggested a somewhat undirected assessment of product aesthetic as indicated below:

I don't know what it (G4 Cube) is but just I like it. The shape and colour can fit in anywhere in my house. - Participant #7

However, when provided with details of product use, there were certain changes in the ways participants spoke about product aesthetic.

I didn't like it because I thought it was a stand lamp. But it's my cup of tea as a lemon squeezer. I will definitely buy it if I discover it. - Participant #4

From these responses it appears knowledge of use provided participants with information that allowed greater opportunities to assess product aesthetic. However, in contrast with Functional preference, frequencies of encoding for Aesthetic preference decreased after knowledge of use (Figure 8). An indication of how decreasing frequencies translate to a shift from aesthetic preferences to more pragmatic concerns can be seen in the following participant's discussion of priorities between product function and aesthetic qualities after knowledge of use:

I consider the function more important than its external appearance. I said I liked it at first because I didn't know what it was and I was attracted by its unique design. Now I am not interested in this squeezer any more. - Participant #6

These results indicated although knowledge of use provided opportunities for participants to better assess product aesthetic, knowledge of use also appeared to reduce the importance of product aesthetic as criteria for assessing the acceptability of the typological product innovations. This result was also reflected in falling frequencies of encoding for Aesthetic preference after knowledge of use for unacceptable products, and increased frequency of encoding as Functional preference for both acceptable and unacceptable products (Figure 8 above)

Cognition of Difference

Encoding of Cognition of difference also differed between the two knowledge conditions, decreasing in the case of both acceptable and unacceptable product examples (Figure 8). In the without knowledge condition, when discussing acceptably labeled products, the participants expressed some curiosity towards what the product may be.

I have no idea about what it (product 6, Hockey Puck) would be but it looks very unique. I haven't seen this kind of product before so I wonder what it is. - Participant #4

However, for the unacceptable products indifference and disinterest emerged towards the products apparent typological differences, as indicated in the following response:

I'm not interested in this product at all because I don't know what it is. - Participant #7

However, in the with knowledge condition, encoded responses appeared to indicate increased interest in product uniqueness. For example, after the uncertainty was revealed, participant #7 was surprised with product 8's unexpected function and referred more openly to the products' novelty:

I would like to try it (product 8, Mac pro) out. I wonder why there's a whole in the top of the device and how it works. - Participant #7

On the other hand, knowledge of use also appeared to serve to solidify more negative responses to product difference. In the following response participant #6 considers product uniqueness as of little relation to product function, which in turn appears to compound a more negative response.

I would say, it is negatively novel. Why should the mouse be this shape? It is unnecessary. It is unique but there's no point in making the mouse into a round shape. - Participant #6

In this response knowledge of product function appears to compound, rather than reverse, a negative response to the uniqueness of product form.

Association by Familiarity

Responses encoded as *Association by familiarity* referred to discussion of familiarity as it related to the form and appearance of the ten product examples. In the without knowledge condition it was observed that the acceptable products received positive responses related to familiarity as seen in the response from participant #3 below:

After having knowledge of use, I was reminded that I thought it (product 4, CD-player) was a speaker because of its mesh surface. So actually it was familiar to me. … I think I am likely to accept the product which I feel more familiar with. - Participant #3

Here participant #3's response appears to indicate how knowledge of use acted to confirm an expectation of function. This in turn provided the respondent with a confidence which appeared to work as driver or catalyst for product acceptability. It may be that if knowledge of use aligns with expectations based upon more familiar products, this is able to act as reassurance, in turn promoting acceptability.

In contrast, participant #5's response to an unacceptable product example indicated more negative attitudes related to the triviality of unfamiliar product appearance:

It (product 8, Mac pro) just looks like a pencil vase. There is nothing new so I am not very interested in this product. - Participant #5

Meanwhile, responses encoding as association by familiarity when provided knowledge of use appeared to relate to function such as operating performance. The following response indicates how an understanding of use appears to support more positive attitude towards product appearance.

I think it (product 4, Muji CD-player) is so cool because I can see how I operate this device without any explanation. It reminds me of a ventilation fan and I am sure that it will turn on if I pull the string. I'd really like to buy one of these. – Participant #10

The following response indicates how the respondent's familiarity with other products provides opportunities to compare and contrast functional characteristics. This in turn appeared to increase product acceptability.

I know some devices having a similar shape to this (product 10, Cirrus 7) it is not a computer but it is really good as a cooling device due to its shape. I like this computer because it looks quite good at cooling. - Participant #9

It may be that opportunities to apply familiar product references to the assessment of product acceptability, and then have those references confirmed within the form characteristics of typological product innovations, acted to increase product acceptability. By providing reference points to existing, more conformist products in terms of form aesthetic; it may be that opportunities exist to increase acceptability of typological product innovations.

Association by Functional Preference

Frequencies of encoding for the category Functional preference almost doubled between with and without knowledge conditions (Figure 8). Within this encoding category, responses often referenced aspects of product function such as usage; usability; utility; personal necessity. The following response from participant #5 indicated how thoughts towards functionality related to product acceptance in the without knowledge condition.

It seems like a hard disk drive. I am not very interested in. It looks too normal. - Participant #5

However, in the with knowledge condition participant #5 appears to come to a sudden realization of a correct product use. This then appears to result in a more positive attitude and increased product acceptability.

I wasn't interested in this product until I got to know it is a computer (product 10, Cirrus 7). Now, it looks so handy and convenient. The material and shape of it look like it is good at thermal emission. -participant #5

However, responses encoded as associated to functional preference when provided knowledge of product use also indicated how knowledge of use may have a negative effect upon product acceptability. An example of this is participant #2's apparent disappointment with the Apple mouse after knowledge of use.

It looks novel but, it's a mouse. There is no point for it to be this shape as a mouse. I'm sure that it will be so uncomfortable to use. - Participant # 2

Perhaps indicative of the category's highest frequency of encoding, the following statement indicates the ways in which function is elevated to a significant consideration for assessing product acceptability once participants' were provided knowledge of use:

Especially in the case of the item like computer or phone, the performance is much more important than the unique form. To me, the products having a familiar shape are more credible. - Participant #6

It may be that knowledge of use and function, as well as product type, interacts to inform acceptability of typological product innovations. If so, opportunities for increased acceptability may be dependent upon how important function is seen to be in a particular product type. For the example above, with regards complex technology-driven products, the elevated statue of function and performance outweighed or undermined the designer's attempt to provide a radically different typology of form.

Discussion & Conclusions

This study has indicated the increased influence of functional product aspects upon user acceptability once knowledge of use was understood. In contrast, formal product aspects appeared to be dominant in determining acceptability when knowledge of use was unclear or

unknown. Although novel form aesthetic, differentiated from product archetype, is a significant characteristic in typological innovation, our findings indicate how the communication and understanding of functional aspects requires careful considered in order to foster improved product acceptability.

According to Rampino's innovation pyramid (2011), typological innovation involves both formal and functional aspects. Based upon the Rampino (ibid) model, we have elaborated the typological innovation construct and its position to focus on the dominant qualities of typological product innovations in terms of acceptability. Figure 9 illustrates how the dominant qualities of typological product innovation depend on the existence of knowledge of use. When knowledge of use is not clear, formal qualities are more dominant than functional ones, with the reverse true of a with knowledge condition. In this model, the four encoding components support description of these dominant qualities in more detail. While *aesthetic preference* is indicated as belonging to formal aspects and *functional preference* belongs to functional qualities, the qualities *association of familiarity* and cogn*ition of difference* may be associated to both (Figure 9).
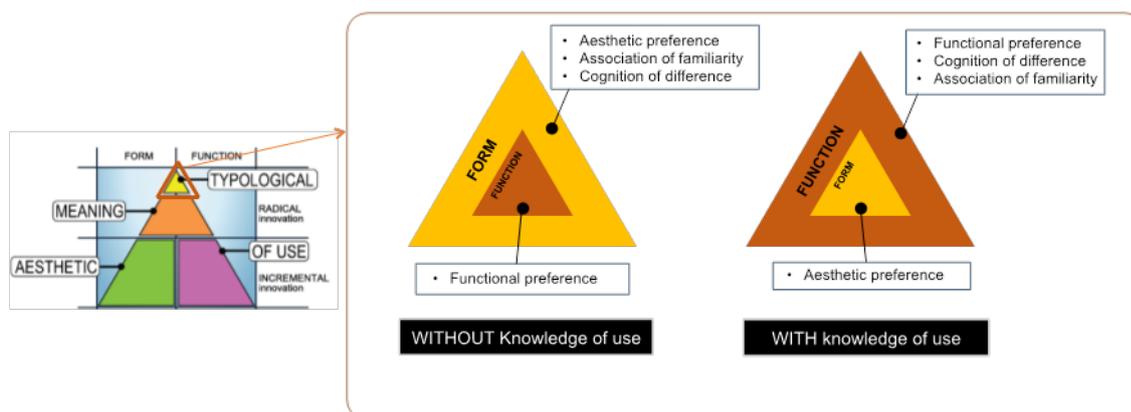
Figure 9 Model of Dominant Quality in Typological Innovation regarding knowledge of use

The without knowledge of use model expresses the dominance of appearance. Here, form aspects are more influential in driving product acceptability. That is, formal qualities are likely to determine an individual's first impression, rather than use or technological aspects as indicated by Rindova and Petkova (2007). However, aesthetic preference depends upon personal taste and subjective emotion. This more visceral response (D. Norman, 2004) more immediately appeared to determine the acceptability of typological product innovations. Without knowledge of use, however, functional aspects such as 'functional preference' are rather neglected due to the lack of clues to function in product form and appearance.

However, our results indicated the temporality of acceptability because of its foundation upon a miss-interpretation of function. For example, participants #5 appeared not to accept product example 8 (Mac Pro) because she regarded it as too similar to her experience of an unrelated product type, in this case a vase. However, upon receiving knowledge that it was in fact a computer, acceptability appeared to increase.

Acceptability has the potential to change after knowledge of use, with the functional qualities appearing more dominant when knowledge of use is known. Therefore, the present study indicates functional preference as a powerful determinant of acceptability. Moreover, when knowledge of use meets expectation, the influence of functional preference as driver for acceptability is likely to increase. However, results also indicated that if knowledge of use fails to satisfy an expectation of function, the product is likely to remain unacceptable even though the typological innovation may be considered novel on the effective dimension.

Regarding formal aspects of typological product innovations, although some participants favored the products' typologically differentiated appearance it was not such an influence upon acceptability compared to functional aspects once use was known. Rather, the form aspects were deeply related to functional aspects in that the participants' preferences for form changed according to function. This study supports existing work indicating novelty and difference as influential for acceptability of typological innovations. However, our findings also indicate how the influence of the novel form aesthetic of typological product innovation is highly sensitive to knowledge of use, with implications for the stability of produce acceptability.

Given that functional aspects have been identified as an influential quality determining acceptability, designers may wish to embed indicators of use within the design of typological innovations to facilitate greater user acceptance. Product acceptability may then be increased as users are provided knowledge of use when encountering typological innovations for the first time.

This explorative study provides an indication of the critical relation between knowledge of use and acceptability of innovative product when encountering typological innovations and what is the powerful determinant influencing people's acceptability in this type of innovation. However, as is the nature of in-the-lab studies, although our focus upon the knowledge of use dimension provides evidence to understand how knowledge of use may influence response to typological product innovation, in the real world of innovative product development many other factors may influence acceptability (i.e. meaning of design, knowledge about the brand or designer, technological novelty, personal preference, interest towards certain product categories, availability of similar products).

Further studies are now required to continue to explore acceptance of typological product innovations. For example, studies of an individual's mental model or schema when encountering typological innovations may help explicate the relationship between product form aesthetic, acceptability and knowledge of use. An investigation of interactions between product brand, knowledge of use and the products inherent characteristics (i.e. materials, form aesthetic, colour and finish) would provide opportunities to further understand how knowledge of use relates to other aspects that contribute to the acceptability of typological product innovations. Building upon the current study and others like it, valuable and pragmatically applicable design strategies, methods and approaches may be suggested to

leverage the potential of typological innovation, while understanding its limitations in terms acceptability.

Acknowledgement

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Author Biographies

Yoonyee Pahk

Yoonyee Pahk is a doctoral researcher at DESIS lab, Ulsan National Institute of Science and Technology (UNIST) in Korea. She earned a Bachelor's degree from Hong-ik University in Korea and Master's degree from Cardiff Metropolitan University in the UK. Her doctorial studies combine knowledge of psychological aspects with product and service design. Her current work explores design for social sustainability, with specific focus upon the issue of ageing for application in support of active lifestyles and sustainable well-being through design methods. Her research areas of interest also include co-design and service design for collaborative and mutual prosperity among stakeholders.

James Self

Dr. Self is Assistant Professor and Director of the Design Practice Research Lab (dpr Lab) at the School of Design and Human Engineering, UNIST. Dr. Self holds a doctorate in industrial design practice, completed at Kingston University London. Previous to this he worked for several years within the design industry in London and Sydney, Australia. Dr. Self also holds degrees in Design Representation (BA) and Digital Modelling with Rapid Prototyping (MA). Adopting research on/for and through design approaches, current and past work explores design skills, reasoning and practices, design innovation and design form and aesthetic. Research findings continue to be disseminated through international conference and peer reviewed journal publication. Dr. Self is also a design commentator for Core77, a member of the DRS (Design Research Society), DRN (Drawing Research Network) and an Assistant Editor of the journal Archives of Design Research. He is peer reviewer for a variety of international conference and journal publications including ACM SIGCHI, DRS, IASDR, and The International journal of Product Development (IJDP), Creativity and Innovation Management (CIM), International Journal of Design Principles & Practices collection and has acted as committee member and reviewer for the DRS EKSIG Special Interest Group.

Joon Sang Baek

Dr. Joon Sang Baek is an assistant professor at the School of Design and Engineering at Ulsan National Institute of Science and Technology (UNIST). He is the director of DESIS lab at UNIST, which is a member of the DESIS (Design for Social Innovation and Technology) International Network. His research areas include design for social innovation and sustainability, transformation design, and product-service system design. His current research focuses on developing sustainable product-service systems for food, energy, and ageing sectors.