The importance of behaviour as an aesthetic feature

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The importance of behavior as an aesthetic feature

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INTRODUCTION

1965 Silver Cloud Rolls Royce

In brand marketing there is much attention on the consumer experiences as a whole. Besides considering the visual and acoustic features of their cars, Ford and Chrysler - for example - use a unique distinctive fragrance. Other manufacturers use different scents for different models. Hundreds of thousands of dollars were spent developing the distinct smell of the 1965 Silver Cloud Rolls Royce (Lindstrom, 2005)

On the contrary, scientific research focuses mostly in one sense in isolation.
Furthermore, most aesthetic theories are inspired by visual phenomena and are only tested with regard to visual effects (Carbon and Jakesch, 2013).

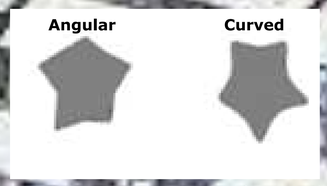
Aesthetic primitives

Aesthetic primitives = simple perceptual aspects of the stimuli that can be defined precisely and that have a universal effect. They may be hardwired in the cognitive system, and may have evolutionistic grounds (Latto, 1995).
However, empirical evidence that individual perceptual features are perceived to be aesthetically pleasant are not definitive.

Size: Bigger is better

According to Silvera, Josephs & Giesler (2002): humans prefer larger pictorial stimuli to smaller ones.
However, this conflicts with Jackson (1992) and Langlois, Roggman, and Reiser-Danner (1990) =men too tall or eyes too big are not aesthetically pleasant.
Silvera et al., proposed therefore that the simple rule "bigger is better" works only for abstract figures and does not work for human physical features.

Shape: Smooth curvature effect



Despite the large amount of data corroborating the preference for smooth curvatures, agreement amongst scientists is still far from being achieved and it is still under debate if this preference is a secondary effect of disliking angular shapes (the threat hypothesis; Bar & Neta, 2006; 2007) or if it is a genuine preference for curvature (Palumbo, Ruta & Bertamini; 2015). The results of this project might contribute to this debate.
In addition, Carbon (2010) suggested that preferences for curved objects could also be modulated by fashion, trends or Zeitgeist effects.

Aesthetics preference in touch

Ekman, Hosman & Lindstrom (1965): the smoother the surface texture the higher was the preference.

However, Rowell & Ungar (2003) and Jehoel et al. (2005) shown that people find aesthetically more pleasant touching rougher substrates over smoother ones

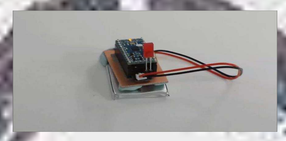
Most of the research on aesthetics has studied static stimuli and in over-simplified conditions. For example, studies on the effects of curvature or size have been conducted on flat 2D surfaces (either computer screens or on paper) overlooking the possible effect of manipulation (touch) on the overall judgement.

Perceptual aesthetics may derive from a combination of factors related to the overall hedonic experience. In order to study aesthetic primitives, it is important to use stimuli that address more than one sense at a time, in what we define as 'compound stimulation'.

RATIONALE

In order to unveil potential aesthetic primitives (if they exist), it may be useful to study complex stimuli that stimulate more than one sense at the time, in compound stimulation, and that can exhibit behaviour.

This project aimed at investigating whether aesthetic preferences for distinctive structural features emerge in compound stimulation.



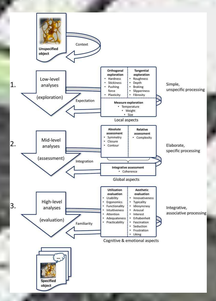
Interactive Objects (IOs): three-dimensional physical artefacts that exhibit autonomous behaviour when handled.

EXPERIMENTS

Stimuli:

Form			Behaviour
Contour	Size	Surface texture	
Round (sphere)	Small (7.5cm)	Smooth (plastic)	Emit a light
Angular (cube)	Large (15cm)	Rough (fabric)	Play a sound
			Vibrate
			Quiescent

Procedure:



Hierarchy of exploration Carbon & Jakesch (2013)

1) exploration = **seen, but not explored via tactile** interaction yet. (view the object without any tactile interaction)

2) assessment = **features from the lower level are grouped and integrated** into a higher-level judgement (touch the object but concentrating on simple elements such as hardness, depth, weight)

3) evaluation **the cognitive and emotional aspect and to aesthetics**. ("play" with the object and now give judge it in terms of...)

Stage1
Qualitative investigation (finding the dimensions)

175 participants
Narratives thematically analysed

Synonyms and antonyms paired to define dimensions, e.g. '*smooth*' / '*soft*' and '*hard*' / '*unhandy*' all define the dimension '*comfort*'

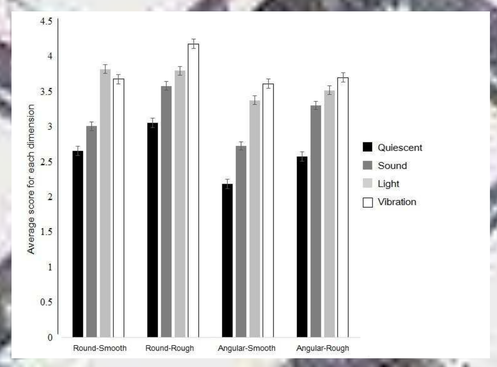
Results
7 dimensions emerged
Interesting, comfortable, playful, surprising, pleasant, special, and relaxing.

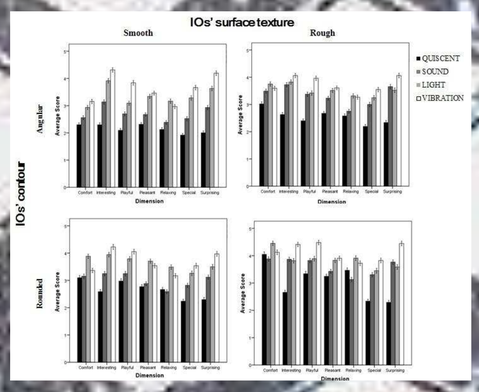
Stage2:
Quantitative investigation

486 participants (251 / 235 per room)
267 M / 219 F; age 21-69; 266 native English

Procedure
Same as stage 1, plus, ratings from 1 (low) to 7 (high) were collected for each object and each dimension.

RESULTS





Strongest effect on behaviour: Any IOs was preferred to quiescent objects

Vibration preferred over light, light over sound. Carbon & Jakesch (2013) suggested that haptic information may overpower other senses (visual and aural).
Spheres were preferred over cubes. (Support the smooth curvature effect)

Rough textures (fabric) were preferred over smooth ones (plastic) Preference for natural over manmade (Rudski et al.2011)?

Size had no effect
Participants' variables had no effect

CONCLUSIONS

Behaviour influences ratings more than any other object characteristic: may it be considered as an aesthetic primitive in Latto (1995)'s terms?

Three interpretations:

1) **Novelty**: Humphrey (1972) showed that the "interesting" dimension is mainly being driven by novelty. Objects more interesting are, in general, more pleasing. However, that besides measuring the dimension of "interesting-ness" or "surprising-ness " participants were explicitly requested to rate the objects in terms of "relaxing-ness" and "comfortable-ness". An explanation based purely on arousal or novelty would predict the effect of the former but not of the latter dimensions

2) **Arousal:** Moving stimuli attract attention and arousal more than static stimuli (Franconeri & Simons, 2003) and aesthetic positively correlates with arousal (Marković, 2012). IOs' reaction to the user can be intended, in some way, as moving stimuli. It can therefore be hypothesised that IOs enhance arousal and this improves the aesthetics experience.

3) **Feedback:** Another possible interpretation may be that the objects produced behaviour *in response* to the action of the participants. They activated when picked up and stopped when put down. It could be argued that objects have actively "interacted" with the participants, "acknowledging" that they have been touched by them. The *feedback* might work as a reward that is positively evaluated.

Is the **smoothness** effect a genuine preference for curvature?

a) Angular objects displaying behaviours are preferred over angular quiescent objects.

b) The difference between the preferences for smooth against sharp contours reduces when objects display behaviours.

c) It is reasonable to assume that a threatening (because sharp) quiescent object would be even more threatening if it displays a behaviour when picked up. But this was not found.

Hence, this result supports the hypothesis that the smooth curvature effect is a genuine preference for curvature as suggested by Palumbo, Ruta, & Bertamini (2015) and not a "dislike" for angularly shaped.

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