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Acting on behalf of the concept.

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5th European Academy of Design Conference

Barcelona

April 2003

The Centre for **Design Research**
northumbria**UNIVERSITY**



BIOGRAPHY

Dr. Hilton is the Second Stream Funding Director for the School of Design at Northumbria University, working from the Centre for Design Research. He was Co-Founder of the Centre for Industrial Design at the University and Co-Founder of Express Engineering Group's product development company XPD, later rebranded Virdev.

His field of research is the 'Psychology of Innovation', which encompasses a number of study areas within psychology, design and business. International interest in this field has been such that he has set up 'POINT', a network that seeks to encourage discussion, news and knowledge transfer between all interested members.

His focus within this field is individual differences and influences. The aim is to investigate and develop the intent to create change, through opportunity identification, communication, problem solving, and decision-making skills.

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ABSTRACT

This paper discusses how drama process and techniques are providing alternative approaches to product concept generation.

An investigation that used drama techniques for concept generation sessions observed that there appears to be an implicit response among designers to investigate functionality before, or instead of form. However, it was proposed that through practice the approach of 'concept-acting' would provide support for the designer's kinaesthetic needs for touch, feel and positional experience. It was also observed that whilst an increasing number of people in the US are actively embracing this type of approach, through a variety of techniques, UK designers appear somewhat more sceptical of the value of drama to their design processes.



INTRODUCTION

This study was carried out as a component of a much broader investigation within the field of innovation psychology, which deals with individual differences and influences that affect and enable intent to create change. One objective within the investigation of innovation psychology has been to develop and evaluate alternative perspectives for identifying and responding to challenges and opportunities.

Over the last decade, product design knowledge has flowed into character animation professions, where designers have chosen to develop their careers in the games or film industry. By considering the possibility of a return flow of knowledge this has further highlighted the potential for an alternative approach to the character and aesthetic of product. This paper discusses how drama techniques and process may enhance the expression and communication of creative ideas and enable the generation of more effective concepts, in the design of products.

By describing the contextual background and then discussing the merits of this perspective, this paper aims to draw some conclusions on the value of 'acting on behalf of the concept'.

CONTEXT

The blurring of boundaries that we see among the creative industries is no less evident in drama, as storylines blend drama with literature and emotional

expression connects drama to therapy. In this paper we consider how kinaesthetic thinking connects drama to design.

One approach to the improvement of kinaesthetic sensitivity might be the practice of the Alexander Technique, (Brennan, 1992), a form of postural therapy that builds bodily awareness in order to correct posture and reduce stress. As an alternative or additional approach to kinaesthetic sensitivity, some drama exercises might be practised as warm-up exercises in preparation for ideation and concept development. For example, the work of

Boal and Johnston:

‘The Found Object’

‘The members of a group are asked to bring in five objects each, objects which have been used. They all then place their objects around the space. Once all the objects have been positioned, the group analyses the relationships between the objects, why they have been placed where, what the connections between the different groups of objects are, whether there are families of objects, what meanings we project onto the objects.’

Boal (1992)

‘The Object Transformed’

‘Taking the objects that people have brought in, the participants change their meaning by using them differently or in different contexts.’

Boal (1992)

‘Machines’

‘The task is to make a machine in which all mechanical parts are integrated. Participants take the role of the parts.’

Johnston (1998)

‘Machines’ has a greater sense of teamwork than the other two exercises, but key to the practice of these exercises is the development of communication skills, between the unconscious and the self, and also the self and peers.

However, it is suggested that an exercise requiring teamwork would be unlikely to prove effective as a beginners exercise.

Masks provide a key vehicle for expression within drama process. (Johnston, 1998). It is claimed that seeing oneself in a chosen disguise, in a mirror, can influence the subconscious intuitively, to express characteristics relating to the mask's nature. The production and donning of concept or product masks may be found to aid the externalisation (Nonaka and Takeuchi, 1995), and expression of aesthetic identity.

Some drama techniques offer alternatives to the physical approach, where a level of structured technique may be applied. For instance in the familiarisation process the actor or animator may find it useful to ask the following questions.

Non-human character analysis:

- Physical Attributes?
- Locomotion?
- Age?
- Life Span?
- Diet?
- Physical Health/Physical Handicaps?
- Defence Mechanisms?
- Relatives?
- Sense of Humour?
- Fears?
- Goals?
- Culture?
- Intelligence?
- Education?
- Relationship to other Characters?
- Livelihood/Industry?
- Name?

Hooks (2000)

However, we must attempt to be objective and aware enough to avoid projecting our own personal characteristics when we are imagining ourselves as the product, which would be counter to the intent towards diversity.

Recognition should also be given to these techniques and process as having educational value to the design process. O'Toole (1992) highlighted six benefits to education from drama:

- Developing the Variety of Human Intelligence
- Developing Ability for Creative Thought and Action
- Education of Feelings and Values
- Exploration of Values
- Understanding Cultural Changes and Differences
- Developing Physical and Perceptual Skills

O'Toole (1992)

The metacognitive approach (Flavell, 1979), to understanding how we understand in respect of our individual differences has given us a better appreciation of intelligence and communication. For instance the simplistic approach to learning styles of Gregorc (1982).

- Visual
- Auditory
- Kinaesthetic

Gregorc (1982)

The investigation of ability has also indicated differences in consciousness whilst reacting to challenge. Csikszentmihalyi (1975) proposed the state of 'Flow', while Scheiffele (2001) proposed a range of Altered States of Consciousness experienced while acting:

- Attention
- Perception

Imagery and Fantasy
Inner Speech
Memory
Higher Level Thought Processes
Meaning or Significance of Experiences
Time Experience
Emotional Feeling and Expression
Level of Arousal
Self-Control
Suggestibility
Body Image
Sense of Personal Identity

Scheiffele (2001)

Schiffele's investigation of these Altered States of Consciousness reported agreement with Farthing's (1992) proposal concerning such experience as potential avenues to new knowledge and experience, personal insight and artistic inspiration.

METHOD

Responses were elicited from design consultancies and animation houses using a concise written introduction to this subject accompanied by a series of descriptions requiring comment. See Appendix. The descriptions included a generic approach to animation character, product concept, and the proposed approach to product character.

In addition to the request for professional comment, design students from the BA(Hon's) Design For Industry course, at Northumbria University, were given the opportunity to experience 'concept-acting'. They were encouraged to explore a chosen product through impersonation, within small groups. They were then asked how this method felt, and how it compared to other

techniques they had also experienced, including brainstorming and structured problem solving.

RESULTS

The response rate from the US was higher than the UK. It was clear from the UK responses that they appeared to have little to say on the matter, finding it difficult to perceive direct benefits of drama technique to design effectiveness from the description provided. Whereas the feedback from the US suggested positive identification with the proposal, and even resulted in suggestions of other contacts who may wish to discuss this area of research.

It was noted with the student groups that the 'concept-acting' technique was initially adopted as an additional approach to the typical investigation of functionality and product interaction. However, even when encouraged to use this technique to consider form instead of function by adopting the intended 'product' perspective, only a few of the students began to feel some benefit. It was also noted by the investigator that these few students were among the least self-conscious of the group, happy to experiment with the approach among their peers.

DISCUSSION

The results indicate that there may be a need for a greater suspension of disbelief/criticism and self-consciousness in approaching this subject for the first time. It would also seem clear that these techniques require practice, to attain competence in kinaesthetic thinking skills and the confidence to perform

in front of peers. This would require the development of a more effective training programme for these techniques than it was possible to provide within this investigation.

It is proposed that there are six levels of engagement for concepts and their context:

- 1 Script writing or scenario description
- 2 Animation or visualisation
- 3 Puppeteering, using objects to aid communication
- 4 Role-play to aid interaction experience
- 5 Acting as a product, to experience a product perspective
- 6 Performance by group, to experience a system perspective

Where communication may be used to refer to colleague or client interactions, the creation of scenarios would communicate the context of the concept that is envisioned. The animator however, would concentrate on the storyline, providing detailed communication of events that are key to the concept. The puppeteer might work more intuitively than the animator, using objects as props to communicate the concept. Then, in the actor modes, interaction might be investigated through role-play, or an investigation of product character may be undertaken through impersonation. Impersonation might be performed individually using hands or whole body, or possibly as part of a team effort, with props. The effectiveness of these options of communication is skill dependent, as with any design method. It is key that the audience is enabled to understand what it feels like to be that product, to identify with its character.

Some of these techniques may feel like play, and so they should, we learned a great deal during our formative years in this way. As proposed by Bailin (1998), imagination and skill are closely linked. Aiding one another's development. Also, the motivation associated with physical and mental play is key to the creative process.

'High levels of creativity are only possible in an intrinsically motivated state, when the individual approaches the task with an intellectual playfulness and a deep level of involvement.'

Amabile (1996)

Further to this, Barker (1977) proposed that by developing acting skills we enhance our instinctual perceptiveness. Then Carr (1986) proposed that we create and then serve the maintenance of drama in our everyday lives, as a way of providing meaning.

Regardless of the scepticism noted in the UK, meaning unarguably is there to be interpreted through kinaesthetic, as well as visual and auditory experience of the present in relation to prior knowledge and intent. The US have perceived and welcomed the values that drama has to offer the design process. 'Synectics', (Gordon ,1961), involves drama technique by way of 'Personal Analogies', described as losing one's self in trying to become an object. Also, 'Starpower', (Shirts, 1969), is a simulation process, which uses role-play to investigate the emotional context of interactions.

Role-play is probably the most effective way of leading people into the value that drama has to offer, and is already widely recognised as a management training technique. As a role-play enhancement to ergonomics we may

interpret greater value from Boal (1985), who described 'Knowing the Body' as a process for enabling individuals to experience the 'muscular alienation' imposed by different kinds of work. Also, it has been observed that once an individual begins to author, animate, puppeteer or act out roles and objects, perception of detail improves.

Schmitt and Simonson (1997) describe how aesthetics communicate product character to consumers through a mix of sensory cues. For example, shape provides cues from angularity and roundedness, symmetry and asymmetry, proportion and size. Brand personality can be described as:

'The set of human characteristics associated with a given brand. In particular a brand can be described by demographics (age, gender, social class, and race) lifestyle (activities, interest, and opinions) or human personality traits (such as extroversion, agreeableness and dependability).'

Schmitt and Simonson (1997)

Further to this they suggested that customers overall impressions of a product are formed from: time, space technology, authenticity, sophistication and scale. But though such lists may provide a starting point in the development of character, they go on to warn of the need to consider cultural interpretations.

So, in order to understand the value of drama to design we must acknowledge the way it aids perception, thinking and communication. We must also acknowledge that while the most common dominant sensory channels among designers are visual and kinaesthetic, the two sensory channels we are receiving most of our information through for thinking and communicating are

the visual and auditory. This issue would only seem to be addressable through both physical and mental practice.

It is proposed that a developmental session, with students or professionals would need to be entered into with conscious suspension of disbelief and their self-consciousness, and that this educational workshop might run as follows:

1. Enhance participant's state of bodily awareness through a limb, joint and muscular assessment exercise, which is part of the Alexander Technique (Brennan, 1992).
2. Practice a physical and mental warm-up exercise. Possibly an adaptation of Jonston's (1998) 'Copying' game. Participants may point at their 'copier' then carry out an action or impersonation of an object, then the copier has to reproduce what they saw, having first pointed to their 'copier'. Variations may be developed, and a number of these may be run concurrently in the group, however, for beginners it might be more appropriate to run a few in serial so that they can be observed more clearly within the group.
3. Consider alternative uses of a given object using Boal's (1992), 'Object Transformed' exercise, to practice creative fluency.
4. Each participant may then take their chosen object and investigate it to some depth with emphasis on kinaesthetic thinking by impersonation and exploration of the objects perceived aesthetic and motive character.
5. This stage of the 'concept-acting' process could either follow on from, or be integrated into, the previous stage. This involves the use of a mask and a mirror. The participant is required to create and wear a representation of the object as a tool to deeper investigation of character.
6. The final stage requires the participants to note their experiences in storyline format using a mix of text and images.

The investigation of effectiveness for an educational workshop such as this is intended to form part of a future investigation that time did not permit within this programme. However, such a workshop may provide for some individuals, a level of immersion in their project not experienced by other approaches, and after a period of incubation prove more effective for inspiration.

CONCLUSION

This investigation contextualised the findings in terms of visual, auditory and kinaesthetic cognitive styles. It concluded that 'concept-acting' is initially adopted as an additional approach to the investigation of functionality and product interaction. However, with practise the new approach can encourage a 'product' perspective to complement the 'designer', 'client' and 'end-user' perspectives, for the development of aesthetic character through the kinaesthetic thinking style.

This investigation looked more broadly than animation to view what drama may offer design, however, animation stills holds the clearer link. It is easier for designers to accept a connection with techniques that they can see directly aiding the communication of their intent, and in conjunction with the concept of role-play it requires only a small step onward to feel what the acting of concepts achieves for their thinking.

On reflection this investigation may seem to have reinvented the wheel in terms of the value of drama to design, but it has nevertheless highlighted the tardiness of acceptance of drama techniques into the design process, through

scepticism over effectiveness. The scepticism itself would seem to be due to the difficulty associated with learning this new way of thinking. Where the visual and auditory channels are explicit and quick to pick up and possibly quick to forget, the kinaesthetic channel is much more implicit. Without the experience of physical practice, the knowledge and understanding of merit is somewhat more difficult to learn. However, once learned, additional, kinaesthetic memories may be created, which do not decay in the way that iconic and echoic memories do. For instance, it is not so easy to forget how to use a swing, ride a bike, or to swim, as it is to forget details of a film, or people's names.

Beyond adoption in focus groups for hypothesis generation and role-play for interaction evaluation, drama techniques are being employed to enhance the marketing of aesthetics. However, there is a possible cultural element to this approach in that while the US indicated confidence in these techniques, the UK's practising design community holds a degree of scepticism at present. However, it is proposed that through further investigation and future workshop dissemination of this approach the value would become more apparent. The intent behind a more in-depth investigation would be the identification of potential opportunities for the development of character and perspective of product. This approach could serve a range of design industries from automotive through to fashion, with techniques that could offer a more rounded sensory vocabulary to be adopted and expressed.

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APPENDIX

Concept Character Development for Product.

You are invited to read and comment upon the following:

INTRODUCTION.

The term Design-for-Drama may spark thoughts of costume and set design, while the term Drama-for-Design conjures up no such apparent roles or processes. An ambiguous vision of dancing or theatrical activity as part of a new design process may be brought to mind, shortly followed by a wry smile. However, it is argued that a well considered hybrid process could for example apply character animation experience to further facilitate the development of product character.

In the majority of cases, the focus of concept generation in the product development process is upon problem solving and opportunity identification with a view to functionality. Sketch-work and model-making follows or runs in parallel to support functional resolution, but as a process it does not exploit the opportunities, of acting and feeling, the *'kinaesthetic'* experience, which may aid in identification with form and personality, in the way that the character animation process can.

It is proposed that there would be levels of engagement for such a hybrid process, providing flexibility appropriate to each situational requirement. The initial levels may be recognised by product designers as a natural part of their present process, though described in theatrical analogy, whereas the deeper levels describe new avenues for investigation. The levels of engagement are proposed to run as follows:

- 1 Script writing or scenario description
- 2 Animation or visualisation
- 3 Puppeteering, using samples to aid communication
- 4 Role-play to aid interaction experience
- 5 Acting as a product, to experience a product perspective
- 6 Performance by group, to experience a system perspective

	ANIMATION CHARACTER	PRODUCT CONCEPT	PRODUCT CHARACTER
Creation of the Brief, Defining:	Role Needs Situation Relationship to others History <i>Motive</i> <i>Conflict</i>	Function Requirements Operational Environment Product Family and Competition History Opportunities Threats	Role Requirements Operational Environment Product Family and Competition History <i>Motive</i> <i>Conflict</i>
Consideration and Development of:	Posture Motion Interaction Constraints	Structure Motion Interaction Constraints	Structure Motion Interaction Constraints
Sketch and/or Model the:	Developing Character	Developing Product	Developing Product
Communication of intent.	<i>Storyboard Presentation</i>	Presentation Boards	<i>Storyboard Presentation</i>
Review:	Animation Character	Product Concept	Product Character
Cycle to completion.	Refine and complete <i>Character</i> for Animators to prototype	Refine and complete Concept for Designers to prototype	Refine and complete <i>Product Character</i> and Function for Designers to prototype

Table of Character, Product, and Hybrid Concept Development Process.

CONCLUSION.

It is suggested that to improve the value of this proposed practice, designers should be encouraged to increase their self-awareness of posture and motion. They should also seek to decrease their self-awareness of 'acting the part', to become motivated by this mode of physical investigation and expression. While there has been found to be a natural tendency for product designers to use this proposed approach to consider functionality first, it is suggested that with practice this approach is effective for conceptualising aesthetic detailing and product character. This kinaesthetic approach is intended to provide a product perspective able to compliment the commonly adopted perspectives of designer, client and user.

Please comment.

Regards

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