Designing for Children
- With focus on 'Play + Learn'

Toy Designs: Whose Choice Matters - Children's or Parents'

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Abstract, The buying of toys is often an adult's decision as much as of a child's. Parents often chose toys for their children based on parameters which the parents think are important for the child. The parent often retains a veto right to differ the choice even when a child is allowed to chose. Although children and parents both search for suitable emotional cues in toys - making meanings of these cues may be different in parents as compared to children. What do children think while choosing a toy? Given a toy are the emotions evoked by it similar in Children and adults? On what basis do parents chose a toy for their children? This paper reports a study that attempts to answer these questions in order to understand the issues involved in designing toys. A set of widely differing toy designs representing various emotional evoking physiographical features were chosen and used in an experiment to gather data from parents and their wards. Interviews and questioners have been used as data collecting instruments. Interactions between toys and children have been video documented. The data collected from 28 parents and 40 children has been analysed at an elementary level to understand the choosing of toys.
Key words: Toys , Emotion , Semantics , Physiognomy , Physiography , Meaning.

1. Introduction

A toy is an object used in play. Many items are manufactured to serve as toys. Children, aided by their imagination, often transform almost any thing into a playful toy. A child may pick up a household item and 'fly' it around pretending that it is an airplane, or a pet dog might play with a rag of cloth by biting it, chasing it, or tossing it up in the air. Some toys that mainly appeal to adults are produced primarily as collector's items and are not intended to be played with but rather displayed.

The origin of toys is prehistoric; dolls representing infants, animals, and soldiers, as well as representations of tools used by adults are readily found at archaeological sites.[1] Toys and play in general, are important part of growing up and learning about the world around us. The young use toys to discover their identity, help their bodies grow strong, learn the relationship between cause and effect and practice skills. Adults use toys as identities and play to form and strengthen social bonds, teach, reinforce lessons from their youth, exercise their minds and bodies, explore relationships, practice skills, and decorate their living spaces.[2][3]

Toys are more than simple amusement; they and the ways that they are used profoundly influence many aspects of life including they becoming part of rituals. In ancient Greece and Rome, children played with dolls made of wax or terracotta, sticks, bows and arrows, and yo-yos. When Greek children, especially girls, came of age it was customary for them to sacrifice the toys of their childhood to the gods. On the eve of their wedding, young girls around fourteen would offer their dolls in a temple as a rite of passage into adulthood.[4] All toys are of educational value. Through play children develop skills, values, attitudes, tolerance, and understanding. A toy will have less opportunity to be educational if it is not able to establish emotional bonds .[5] The form, physical features, expressions of toys all contribute in establishing emotional bonds that eventually matter in choosing them.

2. The Choosing of Toys

The choosing and buying of toys is often an adult's decision as much as that of a child's. It is observable from a toy shop that parents often chose toys for their children based on parameters which the parents think are important for the child. The parent often retains a veto right to differ a choice even when a child is allowed to chose on its own. Although children and parents both search for suitable emotional cues in toys - making meanings of these emotions may be different in parents as compared to children.
Psychologists have pointed out that a too challenging toy can cause frustration and feelings of inadequacy in a child thereby requiring adult guidance. It is posited here that if as adults, parents were to force their opinion for toy selection, similar psychological costs may be involved for the child.

2.1. Implications for designing

While intervention and guidance of adults (often parents) is part and parcel of choosing a toy the reasoning used by the adult becomes crucial for a designer of toys entrusted with the task of embedding visual qualities while designing toys. It is through these visual

qualities of the toy that the emotions evoking cues are semantically embedded during conceptualising. Design researchers working on semantics of emotions ,[6,7] have stated that Physiography of a product expressed through form, colour sound etc are varied by a designer to embed desired semantics and expression (Physiognomy) into the toys' so as to evoke emotions. Semantically how are embedded emotional cues differently understood by children and adults in a toy - is of interest to any toy designer.

This paper posits that children are emotionally triggered by toys that reflect reality. More often than not children look forward to having miniature toys of everything that they come across in real life. These products which can be termed as reality products can be anything ranging form a car to a laptop. Many parents may or may not be aware of the exact nature of emotions catered to by say a car or a lap top. Such choices can be encouraged by the parents as fulfilling 'learning desire' on behalf of the child. What emotional triggers do such toy replicas of cars and laptops evoke in children? Do such toys evoke the similar emotions in adults ? What emotions are involved when a parent chooses a toy for the child. What do children think while choosing a toy ? Given a toy are the emotions evoked by it similar in Children and adults? On what basis do parents chose a toy for their children? Do both of them have similar understanding of the emotions behind their choice? What actually happens in a toy choosing situation can be understood by studying the reaction and behavior of both children and their parents.

3. Experiment

To seek possible explanations and answers to the above questions on whose choice matters and which attributes play an important role an experiment was conducted involving children and their parents. They were asked to choose from a set of toys and reasons for the making their choices were recorded in a form.

3.1. Method:

Prepared questioner format cum interviews was used to observe and collect experimental data.

Subjects were 18 fathers (between ages 32 - 50) and 10 mother (between ages 29 - 35).

Total parents = 28

There were 40 Children (21 sons and 19 daughters). 19 of them were 5 years old and 21 were 4 years old. All were habitants of the Indian Institute of Technology Guwahati residential campus. The experiment was conducted in the pre-primary school and also followed up at the residencies. 14 toys samples (Fig 1- Pictures 1 to 14) chosen from a total of 30 probable samples were used for the experiments. The 14 final toy samples

were chosen by consensus and discussions by three professional designers based on the toys education value , gender representation index and emotional expression. Toys that mimicked real vehicles (auto rickshaw and computers) were included to test the posit

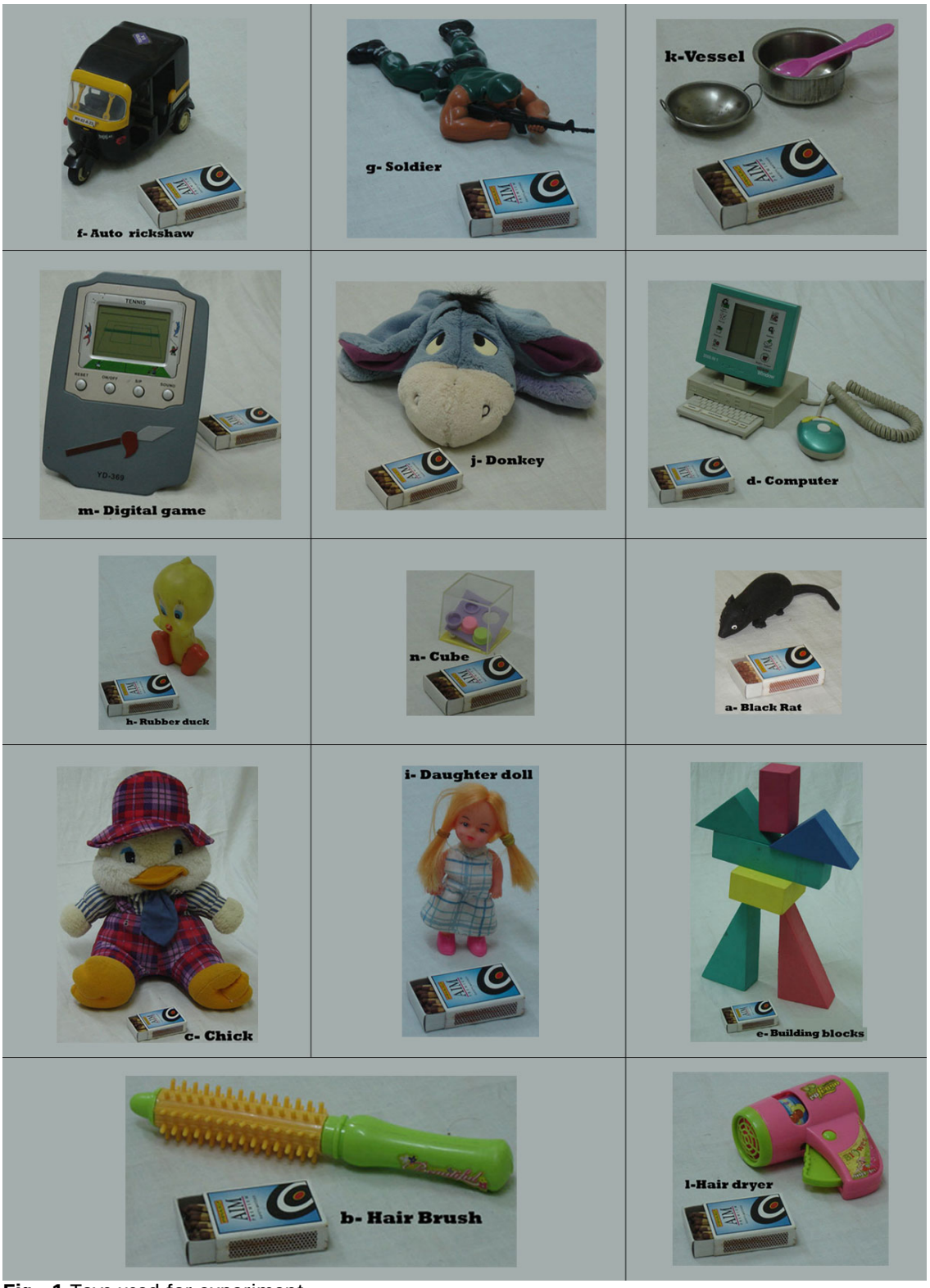


Fig . 1 Toys used for experiment.

that children prefer toys that are miniatures of the real world products such as cars and digital products over other products.

The following sequential questions were asked to children at school and their parents at home after the toy collection was shown to them spread on the floor/table.

Questions to parents

1. Which toy do you like yourself personally as an adult ?
2. Which Toy will you select for your child ?
3. Which one do you think your child will select himself/herself ? (make a calculated guess or prediction)
4. What is the most important thing you look for in a toy for your children? (Emotion, Learning value, Safety, Cost and Life of the toy)
5. For Q2 please tick all relevant attributes the toy has, in your judgment? (Emotions: Love, Surprise, Beautiful, Ugly, Smiling, Happy, Joyful, Delicate, Soft & Nice, Playful & friendly, Curious, Fun, Comic, Innovative, Educative, Safe, Indian, Fear, Wild , Worry, Shock, Peaceful, Fanciful, Easy to use)

Questions addressed to Children

6. You are allowed to have only one toy, which one will you choose? why do you like this toy?
7. Now you are allowed the second toy, which one of the remaining will you take? why do you like this toy?
8. You can also have 3rd toy, why do you like this toy?
9. Which toy you do not like at all from all these toys? Why you don't like this toy?

4. Results and Preliminary analyses:

Only selected results for a few questions have been statistically compiled from the data collected and are presented below keeping the length of this paper in view. No attempt has been made to validate the analysis using statistical tests as the sample size was a limited total of 28 parents and 40 children.

Fig . 2. Data Collection.

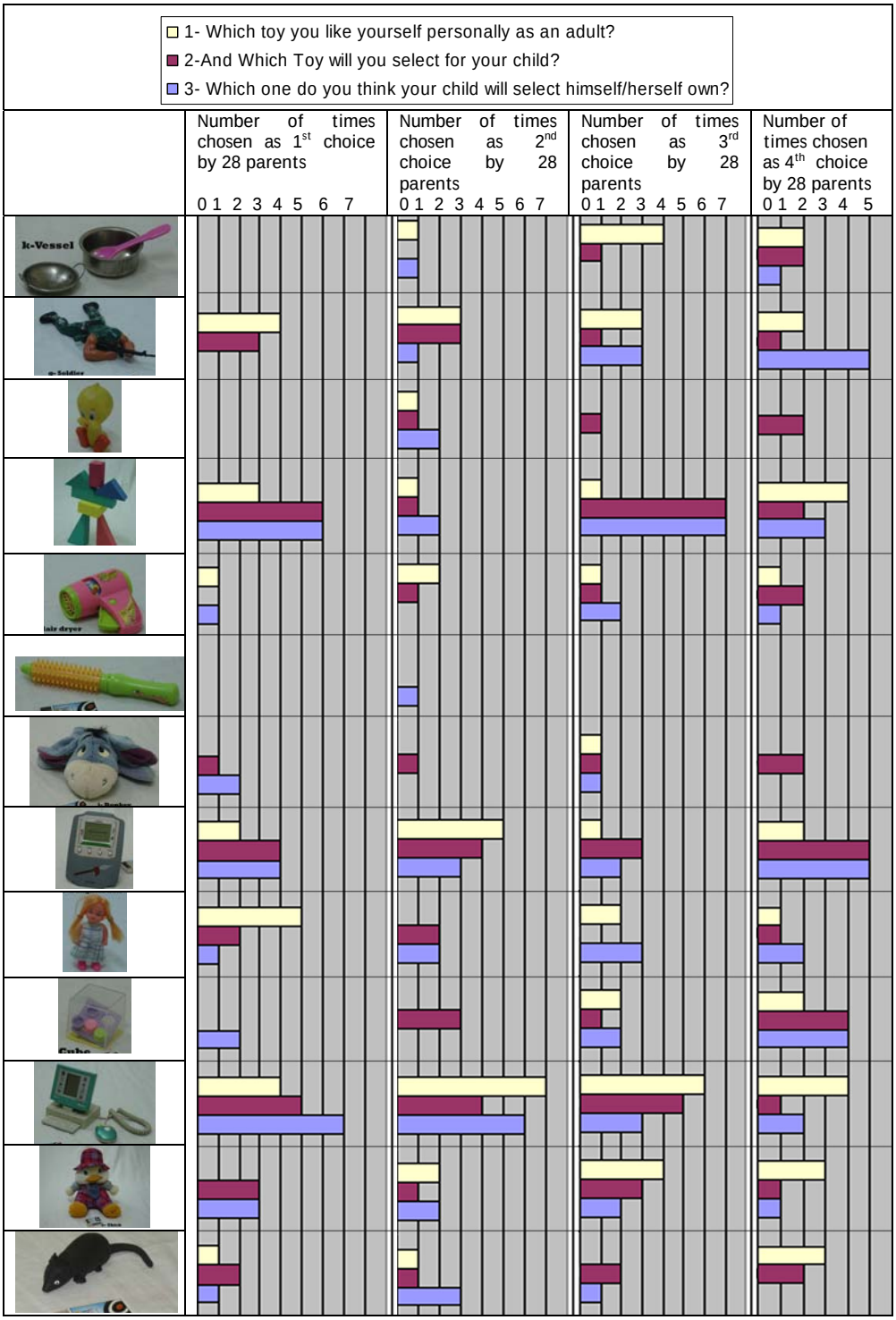


Table 1: Results of the Questions 1,2,3 answered by the parents

4- What is the most important thing you look for in a toy for your children? (Parents results)

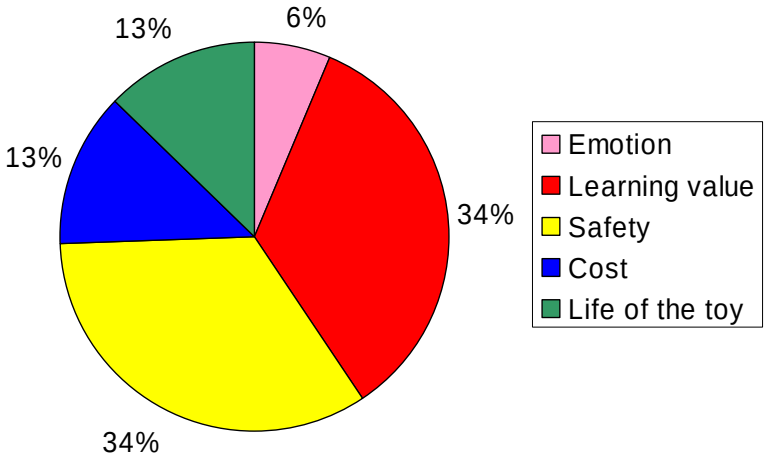
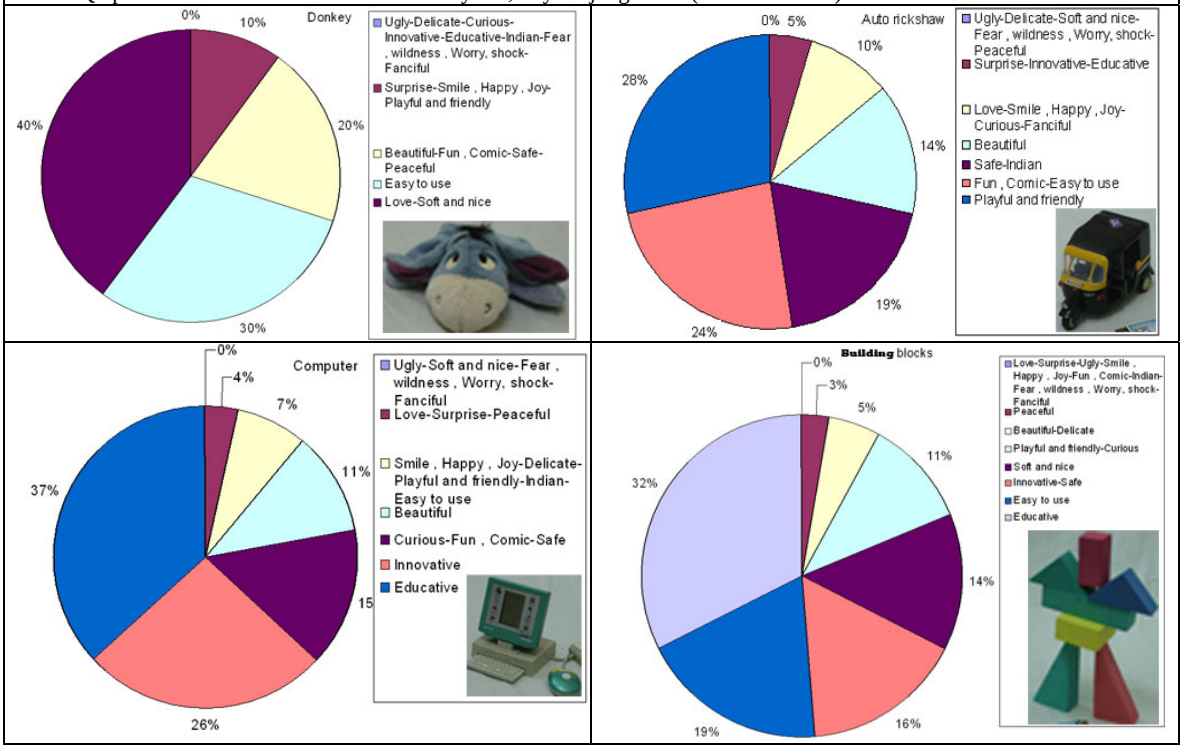


Fig 3. Showing analysis for question No.4.

5- For Q2 please tick all relevant attributes the toy has, in your judgment? (Parents results)



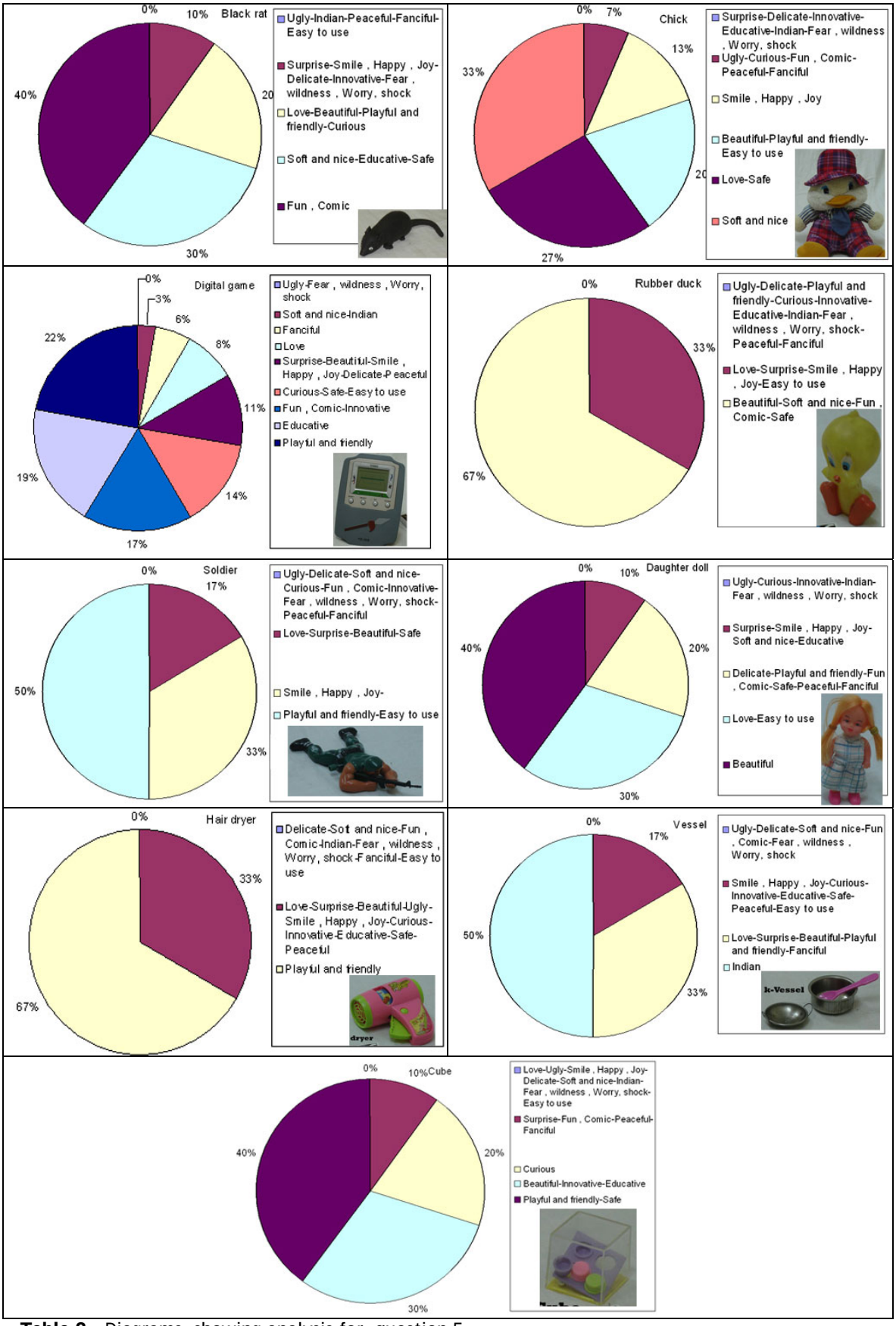
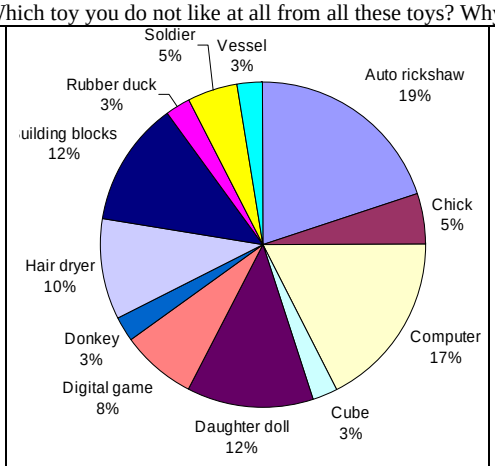


Table 2. Diagrams showing analysis for question 5.

6-You are allowed to have only one toy, which one will you choose? Why do you like this toy?
9- Which toy you do not like at all from all these toys? Why don't you like this toy? (Children results)

Question Number 6



Question Number 9

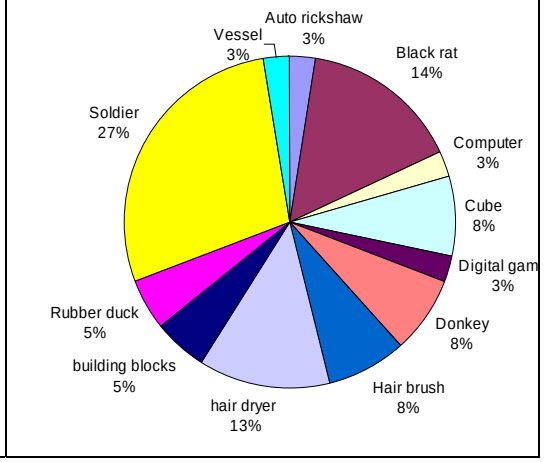


Table 3. Diagrams showing analysis for Q 6 & Q 9

Comparisons between parents self choice (in Question Number 3) and children (first choice in Question Number 6).Number of times chosen as 1st by 28 parents and 40 children

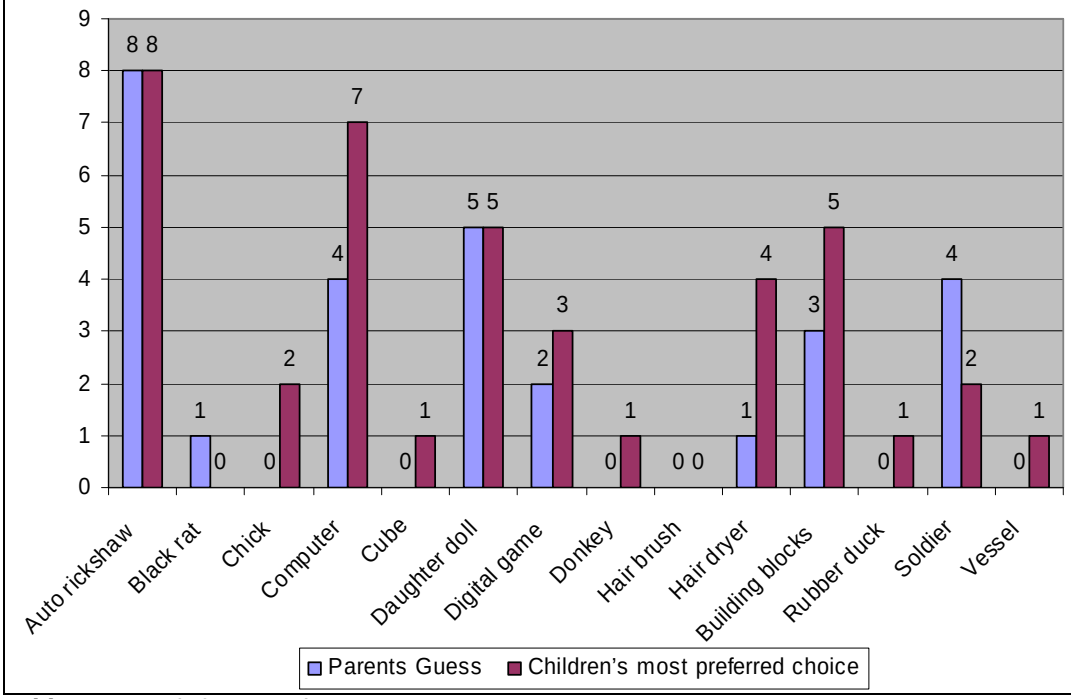


Table 4. Graph for Question 3 & Q6.

5. Discussions

Children's' first preference (Table 4 for Q3 & Q6) was the Autorickshaw followed by the Computer, Doll & Building blocks. Parents on the other hand chose Autiorickshaw, Doll, Computer, Soldier, Building blocks.

This indicates that parents and the children chose alike even though they were doing so independent of each other. As indicated in Fig. 3 , Learning value followed by Safety, Life of toy and Costs were the prime consideration for the parents. Surprisingly Emotions or the expressive feelings that the toys evoked have been rated very low in terms of importance given when toys were selected. Use value of toys along with useability seems to be a bigger factor than feelings evoked by them. Life of the toy can also be interpreted as 'non breakable or reliable and of good quality' which is in-turn linked to safety of the child.

Needs, aspirations and reasons for choosing do not seem to differ much between parents and children when seen at the overall level of data. Other toys that caught overall attention from the children were the Doll & Hair dryer.

Observing the results of question 5 (Table 2) wherein the parents are asked to tick various attributes it is seen that for the Autoricshaw Fun , Friendly , Play have been the associated attributes. The computer has been attributed as educative and innovative. The building block toy has also been attributed with play and fun. Expressive qualities of a toy that are suggestive of evoking feelings seems not play a prominent role in choosing when a widely differing set of toys is available to chose from. It is posited here that expressions and other emotion evoking cues in toys come into play only when there are sets of similar toys under comparison.

Children have chosen the Autorickshaw and Computer as their first preferred toys. (Table 3). The Soldier, Black rat and Hairdryer have been the least liked toys by the children.

In a specific child – parent pairing case the boy choose what is stereotyped as feminine toys - such as dolls and hair brush where as his father had guessed his sons choice to be the soldier. The boy specifically rejected the soldier as a toy he did not like. That the doll could be of educative interest or indicative of deeper emotional needs or simply curiosity value for the boy may not have crossed the father's thoughts.

In another specific case a girl had chosen the hairdryer as the toy she did not like. On gentle probing as to why she did not like it she replied that to her it looked like a gun and was therefore boy's toy.

Interestingly it was noticed that even boys were curious and confused about the buttons on the hair dryer and had mistaken it to be a gun. To the children the hair dryer's

physiography (physical features) was in conflict with its physiognomy (expression). Emotion generating cues, if in conflict with the overall features, are likely to increase curiosity initially but may be a cause for rejecting a toy when it is too difficult for the child to resolve the conflict so as to be able to make meaning of the toy as a whole.

6. Conclusions

From the limited data collected and the small sample size it was observed that there was indeed a similarity between the parents' choice and the childrens' choice even though both were made without influencing each other. 'Feelings' and 'emotions' evoked by the toys were rated lower than attributes such as Safety, Learning Value and Life of the toy. As per the hypothesis before the experiment, it was observed that children prefer toys that are miniatures of the real world products such as vehicles and digital products. When the set consists of widely different toys, the choice is dependent on attributes such as education, safety and life - only after which emotion generating attributes come into the play for the purpose of choosing. Emotion generating cues are given more importance when comparing similar sets of toys or toys belonging to a well defined category. For the sample surveyed the ability of a toy to evoke emotions is used more as a comparative judgment criteria rather than an impulsive buying criteria. The attribute of costs too have been rated higher which is not surprising given the Indian scenario. It implies that toys that rely solely on emotional evoking ability without paying equal attention to educational value and safety, stand a lesser chance of being chosen. Emotion generating cues, if in conflict with the overall features, are likely to increase curiosity initially but may be a cause for rejecting a toy when it becomes too difficult for the child to resolve the conflict in the process of making meaning of the toy as a whole. There are indeed many complex interrelated variables involved in choosing a toy which need to be considered while designing.

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