

# A Framework of using UX Persuasion as a Tool to Motivate People for using ICT Systems

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**Abstract**—At the wake of rapid urbanization in India, there is a plethora of opportunities for designers to solve critical issues relating to the degradation of environment and decline of traditional practices; one such opportunity being the introduction of UX design for motivating people towards traditional building practices. In the recent decades, the traditional architectural practice of Uttarakhand has been under a substantial decline. Enough research has been done on the benefits of traditional building methods over conventional building practices. So it is crucial to motivate people to get back to the local craft which will not only give them employment but also serve the environment. In view of this impending need, paper proposes an intrinsic layering of UX persuasion principles through well researched interaction modes. This would entail utilizing theories of emotional design, Visceral design principle, Social influence [1] - compliance, identification and internalization - conformity bias and authority bias.[2] Thus, the greater aim of the paper is to weave strategies and tweak users' emotions to motivate him towards local building practices in Uttarakhand.

## 1. INTRODUCTION

In order to better understand the process and dynamics of how culture affects the life of people in Uttarakhand, an intensive process of question answers, interactions, interactive games and designing with the people for the people was carried out. The idea was to instigate the locals to open themselves and to understand the behavioral patterns associated with the various forms of culture and tradition.

### Need statement:

Due to rapid urbanization the vernacular building practices of Uttarakhand are under a substantial decline. There has been enough research on the benefits of traditional building practices over the conventional methods. So it is crucial for us as designers to inspire and motivate people to get back to the local craft which will not only serve the environment but also give them employment. Below is a comparison between modern and traditional techniques. (fig.1)

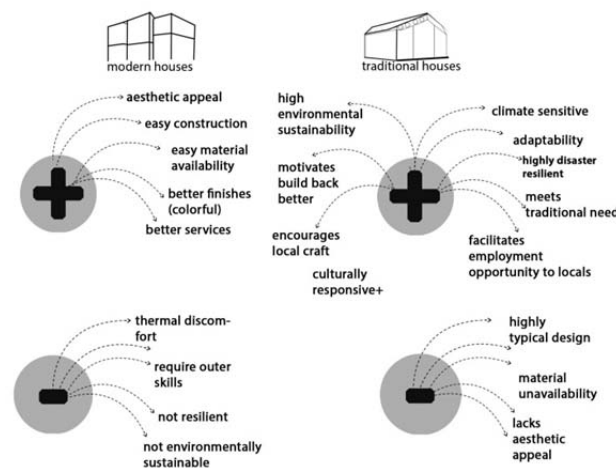


Fig. 1: Comparison between modern and traditional house.

## 2. INTERACTION MODE ANALYSIS

The interaction mode analysis was carried out in order to understand the most feasible options – mostly related to ICT - which can convey the information about the benefits of the traditional architecture as well as motivate the users towards it. The interaction mode was based on the following criteria: availability, cost, production, accessibility, reach, and usage. (Fig. 2) From the analysis it was identified that mobile application is one of the most suitable options to persuade the people - because of the easy availability, cheap price and high usage of smart phones even in the remote areas of the country. Another option which was explored in order to create a comparative scheme was calendar - Because of its easy manufacturability, cheap price and outreach it can be seen as a feasible option.

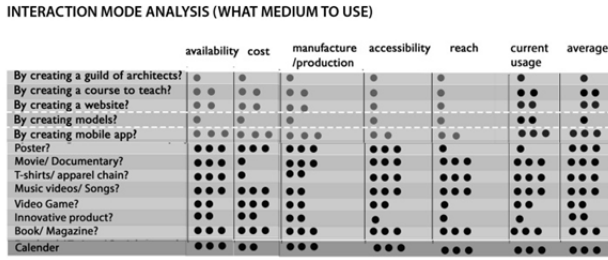


Fig. 2: Comparative interaction mode analysis

**Exploration of different ICT Schemes using relevant UX persuasion theories and existing literature:**

**Scheme 1: Mobile application using social influence as the driving factor for persuasion.**

Humans view themselves as instrument of carrying out other person’s wishes.[3] Once this critical shift of viewpoint has occurred in the person, all of the essential features of obedience follow. Thus In order to persuade people the most effective strategy - which came out after the theoretical understanding of psychology theories- was to target the social acceptance and social pride of the user. This was done by designing the mobile application which presents visuals of existing traditional homes which have been liked and appreciated by other people. Secondly, aesthetically pleasing objects appear to the user to be more effective, by virtue of their sensual appeal. This is due to the affinity the user feels for an object that appeals to them, due to the formation of an emotional connection with the object. [4] Showing alluring features of the houses through visuals and how they are better than modern houses was also introduced Also, a feature of exploring traditional houses all across the world – instigating a feeling in user that these houses are appreciated across the world- was introduced.

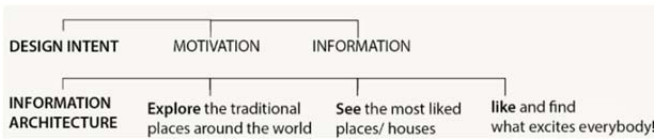


Fig. 3: Design intent and information architecture of first scheme.

**Scheme 2: Mobile application using conformity as the driving factor for persuasion.**

People often conform from a desire for security within a group—typically a group of a similar age, culture, religion, or educational status. Conformity is the act of matching attitudes, beliefs, and behaviors to group norms. [5] I put forward another scheme of design to motivate/ persuade people towards traditional building practices through conformity. With the right environmental influence, allows one to learn and thus, adopt the appropriate behaviors necessary to interact and develop correctly within one's society. [6] Furthermore

people will be more open to things they see others doing. [7] This design was based on the social media applications like Facebook in which a person can upload the image of his traditional house and share it to others. He can also like others’ images and see that how much and which pictures of his house have been liked the most – instigating a feeling of conformity. The user can also rate the houses of others and see which house is the most rated one. Below is a chart showing the design intent for this design scheme.

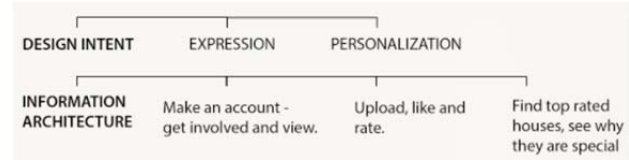


Fig. 4: Design intent and information architecture.



Fig. 5: Principles of influence used in the scheme.

**Scheme 3: Calendar- Using Visceral design principle and authority bias.**

Calendar as a commodity is very common amongst people from middle class economic background in India. Also it’s an easy and widely accepted form of conveying information. Unlike the online sources Calendar provides a spatial reference for the information which is easier to comprehend considering the existing mental model of the users.

Through the calendar the different design efficiencies of traditional buildings were highlighted. Techniques through familiar visuals and verbal information. Using visceral design principle - Initial sensory scan of a particular visual creates appreciation. [4] The Calendar showed alluring images relating to the traditional building practices and beneficial information about those buildings, such as popular old buildings, and important religious institutions. Familiarity/ Identification: Users familiar patterns, icons enhances credibility.

We usually have deep seated duty to authority, and tend to comply when requested by an authority figure. [8] The strength of the bias to obey a legitimate authority Fig. comes from systemic socialization practices designed to instill in people the perception that such obedience constitutes correct behavior. [9] When experts tell something we are more likely to believe it, it influences our decision making and formation of opinions– therefore logo (symbol) of well-known institutions, in this case IIT Delhi was used.

**Scheme 4: Quiz - Persuasion through reward.**

The interface facilitated with questions of minimum difficulty level maintaining an optimum level of challenge for the

people. [10] The quiz was based on information about various benefits of traditional construction. This method of challenge was developed to persuade people by engaging them with the application. A small quiz was designed in which question related to their locality, region or state were asked – incorporating beneficial aspects of traditional buildings. With each correct answer the users were shown a small portion of popular traditional/ iconic building or a very old temple or a monument dilapidated by a disaster which no more exists. [11] The application aimed engaging the user in the process of knowing more about their tradition. User also shown images captured in his mental model through years of living in the traditional settings, images which evoke a sense of beauty and awe. [4]

Evaluation is a systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards. It can help in decision-making; or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed. [12] Through rewards and hidden treasures people were motivated. They were shown pictures of very old traditional houses or temples destroyed in floods centuries ago which would unlock only when one answers the questions of the quiz.

### 3. CONCLUSION:

This paper tried to inform the interaction design professionals about using the different psychology theories in ICT and persuading people with the help of these theories. Primarily theories of social influence -Social influence takes many forms and can be seen in conformity, socialization, peer pressure, obedience, leadership, persuasion, sales, and marketing. [13] Furthermore, different human biases drives related to Social psychology were understood and used systematically in order to create strategies for tweaking the emotions of the users. [14] [15] The irrational aspects of human mind were used under the theme of a humanitarian cause.

### REFERENCES

- [1] Kelman, H. (1958). "Compliance, identification, and internalization: Three processes of attitude change" (*Journal of Conflict Resolution*. 2 (1): 51–6
- [2] Milgram, Stanley (1963). "Behavioral Study of obedience." *The Journal of Abnormal and Social Psychology*. 67 (4). Jul 1963
- [3] A cognitive reinterpretation of Stanley Milgram's observations on obedience to authority". *American Psychologist*. 45: 1384–1385. 1990.
- [4] Norman, Donald Arthur (2005). *Emotional Design*. Basic Books. ISBN 0-465-05136-7.
- [5] Cialdini, R. B., & Goldstein, N. J. (2004). *Social influence: Compliance and conformity*. *Annual Review of Psychology*, 55, 591–621.
- [6] L, G (March 1931). "Conformity". *Peabody Journal of Education*. Taylor & Francis, Ltd. 8 (5): 312.
- [7] Hinnosaar M Authority Bias (2012)
- [8] Blass, Thomas (1991). "Understanding behavior in the Milgram obedience experiment: The role of personality, situations, and their interactions" (PDF). *Journal of Personality and Social Psychology*. 60 (3): 398–413.
- [9] "Neuro Web Design: What Makes Them Click?" 2009. *Choice Reviews Online* 47 (01): 47–0378 – 47–0378.
- [10] Mark. A Guadagnoli and Timothy D. Lee (2004).
- [11] Yerkes RM, Dodson JD (1908). "The relation of strength of stimulus to rapidity of habit-formation". *Journal of Comparative Neurology and Psychology*. 18: 459–482.
- [12] *Staff (1995–2012)*. "2. What Is Evaluation?". *International Center for Alcohol Policies - Analysis. Balance. Partnership. International Center for Alcohol Policies*. Retrieved 13 May 2012.
- [13] "Qualities of a Leader - Online Leadership Guide - Personal MBTI Type Analysis". *qualities-of-a-leader.com*. December 26, 2011. Archived from the original on March 22, 2012. Retrieved 8 April 2013. Kelman, H. (1958).
- [14] Ellis RM *Middle Way Philosophy: Omnibus Edition* (2015).
- [15] Mélon, Jean (1996), *Notes on the History of the Szondi Movement* (French original). Text for the Szondi Congress of Cracow, August 1996.