

RITUALIZED TECHNOLOGY

For (social) (psychological) benefit

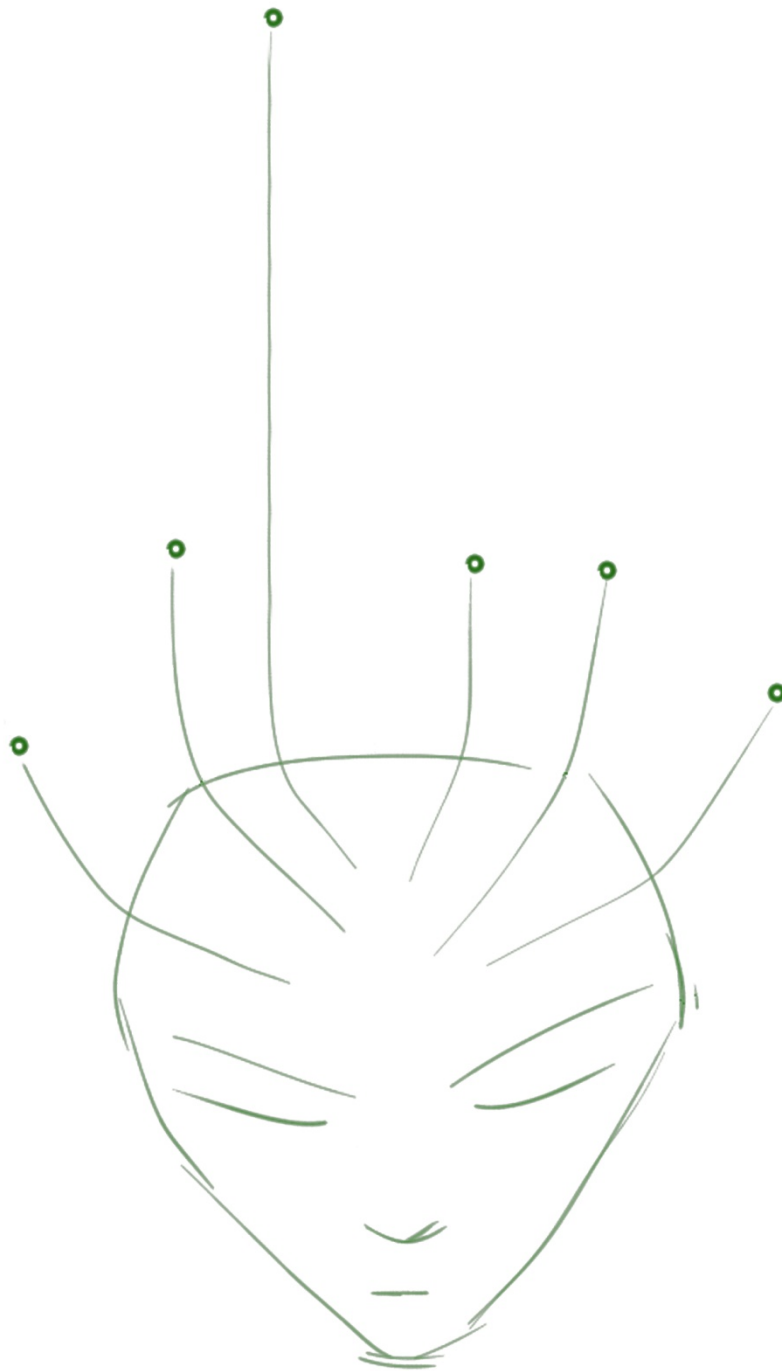


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1. INTRODUCTION

As we see it today or the years to come, objects are surpassing their real world forms, ubiquitously bringing together a functional, psychological and sociological support system. In the realm of contemporary technology, the wheels are churning towards answers unasked for. The relevance and meaning seem blurred to the eyes in this era, dancing ambiguously over the black, white and grey. The very human experience of life is being reinvented while 'progress' takes its just course. Habits are being created lacking proper forethought on the implications. The messages subconsciously being given out and absorbed are obscure, and in need of dire contemplation. Roland Barthes, "the new is not a fashion it is a value".

"Design plays a significant role in environmental, ethical, economic and cultural arenas, and contributes to people's wealth, cultural identity and quality of life" - Design for a contemporary world, Christian Boucharence.

In the globalized world, the designer, manufacturer, client and the brand/company are of different nations and cultures. Encyclopedia Britannica defines globalization as the process by which the experience of everyday life is becoming standardized around the world. With the advent of a global design language usually entailing westernization, cultural identities and influences in the design process is diminishing. Certain social rituals were designed over ages to advocate better behaviors, value-systems and harmonious co-existence. In the current day scenario, social rituals are being created around the digital world, advocated by profit making structures. Sherry Turkle, "I share, therefore I am". The beeps, tweets, pings etc from our digital devices are more than mere sounds. They surround us throughout our daily routine, alerting of message or any other social activity relating to our digital profiles. These hold much meaning and symbolic importance since they represent our digital social identities to each of us. The sounds serve three purposes: They alert us, invite us and ultimately in a much subconscious level remind us of our other form of existence, the digital existence. Our response

is much predictable and ritual like. It's as though we keep jumping between two parallel universes. Through my observations, I have found the design of religion to have similar elements. For example the chiming of a bell, which is practiced commonly across many religions, subconsciously reminds someone of their 'spiritual' existence. The sound of the bell, covers an area almost like a metaphysical structure, creating a zone of awareness which encourages people to keep their regular functions out of it. This metaphysical area serves as a symbolic gap in the routine life for people.

Product design is constructing the gateways to the digital virtual world. The products embody a whole lot of meaning to the user's cognition, quite similar to religious symbols which to the believer's cognition act as gateways to a different dimension. Studying and understanding the semantics of culture and religion from the standpoint of psychology might present ways of conscientious design, especially since we are not just designing new products but social structures around them. The new technological devices are not limited to a separate space or section of our day, they are on us almost as an extension of the self. The digital natives are distanced from the notion of presence and attention to each other in the physical reality. Widespread automatization of things around us are further limiting social interactions. Ticketing booths, vending machines, automatic doors, online shopping are taking away moments of human interactions and potential priming opportunities, such as the lingering smile from the brief interaction when someone holds a door open for another. One of the ideas to come out of cognitive psychology in recent years is 'priming'. Priming is an implicit memory effect in which exposure to a stimulus influences a response to a later stimulus. It can occur following perceptual, semantic or conceptual stimulus repetition. Research has also shown that the affects of priming can impact the decision-making process. Priming, although administered sub-consciously in design processes, need to be stressed upon for the societal good.

While etiquettes are being defined within the digital space, the object joining the physical real to the virtual, is responsible for communicating the behavioural appropriateness. The point of this study is to analyze the social and psychological effects of technology and in turn discover methods in context of design to regulate the

defects. This study also ponders over the question of whether there is insight in the design of rituals which could be embodied onto digital devices.

2. TECHNOLOGY

2.1 THE NEW TECHNOLOGICAL POSSIBILITIES

Technology has come a far way in facilitating humanity's greatest needs, and while doing so, have become equally desirable today. They are no more iron clad monstrosities, rather affable gateways to a world of immense possibilities. They entertain us, navigate us, connect us, inform us and even sometimes emulate us. They have aided the growth of civilization at a rate like never before. Offices are better connected with increased efficiency through emails, portable gadgets have brought the world to our palms even on the go. We are constantly in touch with happenings around the world and life events of friends and family through social media like Twitter and Facebook. In fact, Public figures like film stars and politicians, who in past seemed out of reach to the common mass are posting about their daily life and opinions in real time to their fans online through social networking. The recent revolution in the Arab world, the Arab spring, utilized social media as an effective means to spread information and promote insurgent agendas. The technological advancements have helped development in various critical fields like medicine, such as the iSpO2 for iphone enables people to get instant pulse readings. Quadriplegic patients now have the possibility of being able to control robotic hand with their brain, Jan Scheuermann was the first to demonstrate that in 2012. Low-cost consumer EEG devices such as

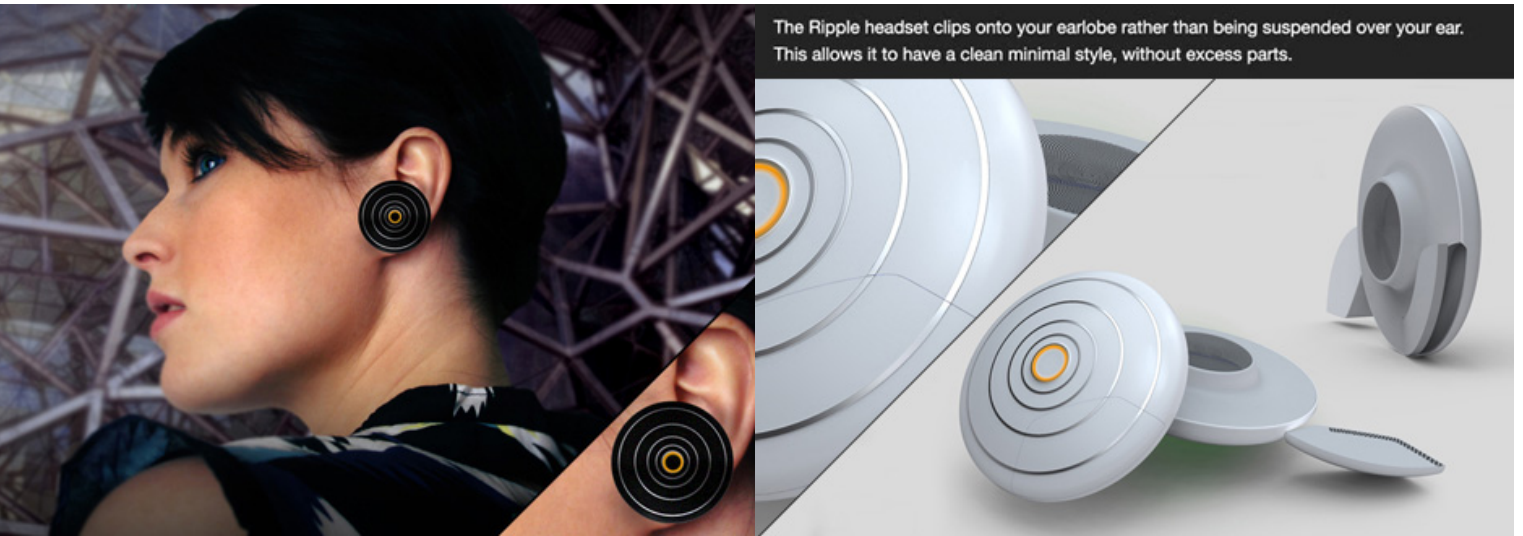
Emotiv's EPOC headset, lets users interact with computers using their thoughts alone.



Andy Warhol's prediction, "In the future, everyone will be world-famous for 15 minutes", has been almost proved true, thanks to the effects of social media. Everyone now has access to an equal platform to showcase their work, skills and even life in general. A 'life-logging' intelligent camera has recently been developed by Oxford Metrics Group, called the Autographer, a camera which is clipped to shirt or belt of user and through a number of sensors, including a colour and light meter, magnetometer for direction changes, GPS for location, infrared light to detect movement, and a thermometer, can decide when things have changed in terms of the environment around the camera, and if it meets the inbuilt criteria, a picture will be taken. The wonders this device presents to the experience of life and a 'never before' experience sharing ability is surely invigorating, at the same time encouraging an appetite for adventure and travel. Although in a contradictory view, William C. Cheng, Leana Golubchik, and David G. Kay write about the politics of remembrance. They anticipate a future in which we will all wear self-monitoring and recording devices. They discuss the danger that state authority will presume that when behaving lawfully, people will be wearing the device. Not wearing the device will be taken as indicative of guilt. Yet, even given this dark scenario, they conclude with the claim that, essentially, the train has left the station: "We believe that systems like Total Recall will get built, they will have valuable uses, and they will radically change our notions of privacy. Even though there is reason to be skeptical that there will be any meaningful legal protection for the privacy status quo, we believe that useful technologies are largely inevitable, that they often bring social changes with them, and that we will inevitably both suffer and benefit from their consequences."

Wearable technology, is the new popular surge in the realm of contemporary technology. From watches that have computing capabilities, wrist bands that monitor health data of the users to brassieres sensing emotional stress and discouraging over-eating for women, clothes made not only functional but serving aesthetic function through technology like adorning live tweeter bubbles on shirts, have opened up a huge arena for exploration for designers and

inventors. Ilya Fridman, designed a Bluetooth headset into a pair of earrings with a hidden microphone, called the "Ripple" headset.

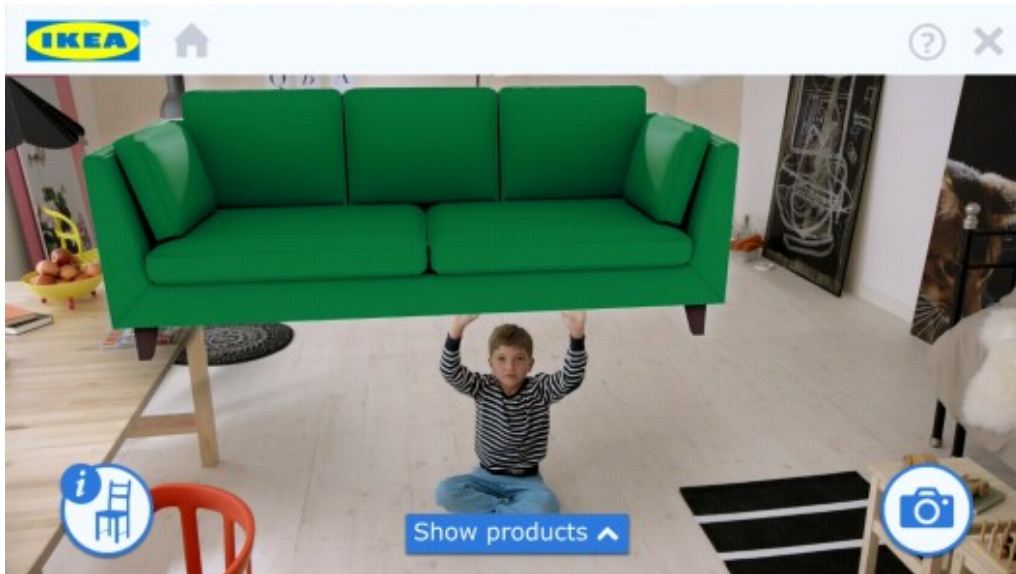


Google has been developing the Google Glass which is a wearable computer with an optical head-mounted display that displays information in a smartphone-like hands-free format, that can communicate with the Internet via natural language voice commands.

Wearable technology falls under the concept of **Ubiquitous computing**, which is an advanced computing concept where computing is made to appear everywhere and anywhere. In contrast to desktop computing, ubiquitous computing can occur using any device, in any location, and in any format. A user interacts with the computer, which can exist in many different forms, including laptop computers, tablets, terminals and phones. The underlying technologies to support ubiquitous computing include Internet, advanced middleware, operating system, mobile code, sensors, microprocessors, new I/O and user interfaces, networks, mobile protocols, location and positioning and new materials. This new paradigm is also described as pervasive computing, ambient intelligence, or everywhere. Each term emphasizes slightly different aspects. When primarily concerning the objects involved, it is also known as physical computing, the Internet of Things, haptic computing, and things that think. Rather than propose a single definition for ubiquitous computing and for these related terms, a taxonomy of properties for ubiquitous computing has been proposed, from which different kinds or flavors of ubiquitous systems and applications can be described. Ubiquitous computing touches on a wide range of research topics, including distributed computing,

mobile computing, location computing, mobile networking, context-aware computing, sensor networks, human-computer interaction, and artificial intelligence. One of the earliest ubiquitous systems was artist Natalie Jeremijenko's "Live Wire", also known as "Dangling String", it was a piece of string attached to a stepper motor and controlled by a LAN connection; network activity caused the string to twitch, yielding a peripherally noticeable indication of traffic. It was called an example of calm technology. Calm technology is a type of information technology where the interaction between the technology and its user is designed to occur in the user's periphery rather than constantly at the center of attention. Information from the technology smoothly shifts to the user's attention when needed but otherwise stays calmly in the user's periphery.

Augmented Reality is a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view. It is a type of virtual reality that aims to duplicate the world's environment in a computer. An augmented reality system generates a composite view for the user that is the combination of the real scene viewed by the user and a virtual scene generated by the computer that augments the scene with additional information. The virtual scene generated by the computer is designed to enhance the user's sensory perception of the virtual world they are seeing or interacting with. The goal of Augmented Reality is to create a system in which the user cannot tell the difference between the real world and the virtual augmentation of it. Today Augmented Reality is used in entertainment, military training, engineering design, robotics, manufacturing and other industries. With the launch of apps like Sphero's The Rolling Dead and technology like Google Glass forging the way, it is a very exciting time for augmented reality. The Sphero app allows you to control Sphero (a robotic ball) from a smart phone or tablet. The display shows video coming from the back facing camera of the mobile device with one significant augmentation: an adorably plump, animated beaver rendered over the ball. If you are looking at the screen, it appears as if you are driving a 3D cartoon character around your living room. There are various arenas this technology is being experimented with such as, navigation, art, archeology, architecture, gaming, education, industrial design, military, medical, and a lot more. IKEA catalog uses augmented reality to give a virtual preview of furniture in a room.



Artificial intelligence is the intelligence exhibited by machines or software, and the branch of computer science that develops machines and software with intelligence. The developments in this field have been the most keenly looked up to, since it holds the answer to our sci-fi expectations from future. When active and interactive computer toys were first introduced in the late 1970s, children recognized that they were neither dolls nor people nor animals. Nor did they seem like machines. Computers, first in the guise of electronic toys and games, turned children into philosophers, caught up in spontaneous debates about what these objects might be. The Tamagotchi and Furbies were introduced in the market in the late 90's. These were electronic toys which acted as pets for children. Like live pets, they need care and love to not only survive but grow accordingly. The current Furbies are evolved enough to mould their personality as per the treatment it receives from the owner, they even have the ability to learn English from the owner, making them indeed much life-like. Maja Matarić, Professor in University of Southern California, is working on developing Social Robots for autistic patients helping them with social interaction issues. Mataric's mentor from MIT was Rodney Brooks, who was the inventor behind Roomba IRobot, the artificially intelligent vacuum cleaner. Roxxxy, the first artificially intelligent sex robot made its public debut in AVN Adult Entertainment Expo (AEE) in Las Vegas, 2010. It has synthetic skin

which can warm up to emulate human skin, it has an AI engine programmed to learn the users like and dislikes.



2.2 PSYCHOLOGICAL IMPACTS OF TECHNOLOGY

Contemporary technology bedazzles us with its abilities, answering our needs and vulnerabilities, luring us into its possession. Are we anymore capable of pulling out the plug? Our lifestyles, social conduct, personal identity are all under impact of this digital revolution. These impacts need to be studied, understood and addressed to, since disconnecting ourselves is not an option nor a practical solution.

MULTI-TASKING AND ITS HINDRANCE TO PRODUCTIVITY

Multitasking, was once considered as a blight which later turned into a skill of great value in the digital culture. It is now viewed as a necessary skill in gaining success in academics or at the workplace.

People capable of doing many things at once are being placed ahead of those lacking this skill. overtime it was being recast as a virtue, even in schools, getting children adept to it at an early age, able enough to face the challenges of the all-encompassing digital age. Were we too quick to agree and accept? Today, a child does homework alongside attending to Facebook, shopping, music, online games, texts, videos, calls, and instant messages. Absent only is e-mail, considered by most people under twenty-five a technology of the past, or perhaps required to apply to college or to submit a job application.

When psychologists study multitasking, they do not find a story of new efficiencies. Rather, multitaskers don't perform as well on any of the tasks they are attempting. But multitasking feels good because the body rewards it with neurochemicals that induce a multitasking "high." The high deceives multitaskers into thinking they are being especially productive. In search of the high, they want to do even more. In the years ahead, there will be a lot to sort out. We fell in love with what technology made easy. Our bodies colluded. These days, even as some educators try to integrate smartphones into classrooms, others experiment with media fasts to get students down to business.

Research done by Genesee Survey Services, Rochester, New York, to explore definitions, frequencies, and motivation for personal use of work computers, analyzed 329 employees' responses to an online survey, which asked participants to self-report frequencies for 41 computer behaviors at work. Results support a distinction between computer use that is counterproductive and that which is merely not productive. Nonproductive Computer Use occurred more when employees were younger, had Internet access at work longer, and had faster Internet connections at work than at home.

Counterproductive Computer Use occurred more when Internet access was newer and employees knew others who had been warned about misuse. While most employees who engaged in computer counter productivity also engaged in computer nonproductivity, the inverse was uncommon.

We are surrounded by the digital devices, media is always there, waiting to be wanted. when this happens, people lose a sense of choosing to communicate. Social media has been designed in such a way to make us keep going back maintaining a flow of activities.

Facebook for example encourages social voyeurism through the news feed where everyone else's activity is our business. How are we to stay focused on our own life per say. Social voyeurism targets all, the shy and the extroverts alike, since participating is not necessary. A ping here, a beep there, is all it takes now to shift our attention to a social situation. Earlier social interactions were limited to certain occasions, we would return home and be freed of the behavioral obligations, free from listening to an aunt's complains, an uncle's political views or a friend's preference of restaurants. Now, we are constantly being bombarded with all of it and that too at the same time. The space and walls dividing us are suddenly absent. It is getting tougher and tougher as we pile our promises of being regular with replying to SMS's, emails, wall posts, twitter comments, updating Instagram, Foursquare, etc and etc. Our networked devices encourage a new notion of time because they promise that one can layer more activities onto it. Because you can text while doing something else, texting does not seem to take time but to give you time. This is more than welcome; it is magical. We have managed to squeeze in that extra little bit, but the fastest living among us encourage us to read books with titles such as In Praise of Slowness. And we have found ways of spending more time with friends and family in which we hardly give them any attention at all. We are overwhelmed across the generations. Teenagers complain that parents don't look up from their phones at dinner and that they bring their phones to school sporting events.

ADDICTION AND SELF CONTROL ISSUES

Mid 2013 the game Flappy bird was launched and soon enough became one of the top gaming apps. The game had almost no learning curve yet it was extremely difficult at the same time. The graphics were simple and cute resembling the classic Nintendo Mario Super Bros. The competitive and addictive elements lead many to boast about their score and get others to try it out. All of these things combined attributed to the viral spread of Flappy Bird. The news that shocked everyone was in early 2014 when the developer suddenly decided to take off the game from app stores stating that the game's

addictiveness is what convinced him to remove it. Nguyen the developer said, "Flappy Bird was designed to play in a few minutes when you are relaxed, but it happened to become an addictive product. I think it has become a problem. To solve that problem, it's best to take down Flappy Bird. It's gone forever."

Internet addiction is real. Like alcoholism, drug addiction, or compulsive gambling, it has devastating effects on the lives of addicts and their families: divorce, job loss, falling productivity at work, failure in school, and, in extreme cases, criminal behavior.

Keith Bakker, director of Smith & Jones Addiction Consultants, created the new program in response to a growing problem among young men and boys. "The more we looked at it, the more we saw [gaming] was taking over the lives of kids." While most people associate addiction with *substances*, such as drugs or alcohol, doctors recognize addictive *behaviors* as well. Michael Brody, MD, set forth the following criteria:

1. The person needs more and more of a substance or behavior to keep him going.
2. If the person does not get more of the substance or behavior, he becomes irritable and miserable.

Kimberly Young, PsyD, clinical director of the Center for On-Line Addiction and author of *Caught in the Net: How to Recognize the Signs of Internet Addiction*, says compulsive gaming meets these criteria, and severe withdrawal symptoms have been seen in game addicts. "They become angry, violent, or depressed. If [parents] take away the computer, their child sits in the corner and cries, refuses to eat, sleep, or do anything." Unlike with substance abuse, the biological aspect of video game addiction is uncertain. "Research suggests gambling elevates dopamine," Young says, and gaming is in the same category. But there's more to addiction than brain chemistry. "Even with alcohol, it's not just physical. There's a psychological component to the addiction, knowing 'I can escape or feel good about my life.' In gaming, the person is trying to change the way they feel by taking something outside of themselves. The [cocaine] addict learns, 'I don't like the way I feel, I take a line of cocaine.' For gamers, it's the fantasy world that makes them feel better. The lure of a fantasy world is especially pertinent to online

role-playing games. These are games in which a player assumes the role of a fictional character and interacts with other players in a virtual world. As Young puts it, an intelligent child who is unpopular at school can "become dominant in the game." The virtual life becomes more appealing than real life.

Psychologist Mihaly Csikszentmihalyi examines the idea of "zone" through the prism of what he calls "flow," the mental state in which a person is fully immersed in an activity with focus and involvement. In the flow state, you have clear expectations and attainable goals. You concentrate on a limited field so that anxiety dissipates and you feel fully present. Flow would capture how some people who enjoy single player games describe the pleasure of computer games they like the game best if you get sucked in. That's why they like playing single-player, not online, because you can get sucked into a character. There's this whole different world you can pretend to be in. That's why it's different from a movie. When you're watching a movie, you're watching all the things happening, but when you're playing a video game, you're inside of it, and you can become the character you're playing as. It feels like you're there.

In the flow state, you are able to act without self-consciousness. Over stimulated, we seek out constrained worlds. You can have this experience at a Las Vegas gambling machine or on a ski slope. And now, you can have it during a game of Civilization or World of Warcraft. You can have it playing The Beatles: Rock Band. You can have it on Second Life. And it turns out, you can have it when texting or e-mailing or during an evening on Facebook. All of these are worlds that compel through their constraints, creating a pure space where there is nothing but its demands. It is flow that brings so many of us the experience of sitting down to do a few e-mails in the morning, just to "clear the decks" for a day of work, and then finding ourselves, five hours later, shocked that the day is half gone and no work has been done at all. Our neurochemical response to every ping and ring tone seems to be the one elicited by the "seeking" drive, a deep motivation of the human psyche.¹⁴ Connectivity becomes a craving; when we receive a text or an e-mail, our nervous system responds by giving us a shot of dopamine. We are stimulated by connectivity itself. We learn to require it, even as it depletes us.



IDENTITY CRISIS

Baroness Greenfield, a professor of pharmacology at Oxford University, said Facebook and Twitter have created a generation obsessed with themselves, who have short attention spans and a childlike desire for constant feedback on their lives.

Professor Greenfield believes the growth of Internet "friendships" as well as greater use of computer games could effectively "rewire" the brain. This can result in reduced concentration, a need for instant gratification and poor non-verbal skills, such as the ability to make eye contact during conversations, she said. "What concerns me is the banality of so much that goes out on Twitter. Why should someone be interested in what someone else has had for breakfast?" Professor Greenfield was quoted as saying by the Daily Mail. "It reminds me of a small child (saying): 'Look at me Mummy, I'm doing this', 'Look at me Mummy I'm doing that'. It is almost as if they are in some kind of identity crisis. In a sense it's keeping the brain in a sort of time warp." The academic suggested that some Facebook users feel the need to become "mini celebrities" who are watched and admired by others on a daily basis. They do things that are "Facebook worthy" because the only way they can define themselves is by "people knowing about them". More than 750 million people in the world use Facebook to share photographs and videos and post regular updates of their movements and thoughts. Millions have also signed up to the micro-blogging site Twitter which lets members circulate short text and picture messages about themselves. Professor Greenfield, former director of research body the Royal Institution, said: "It's almost as if people are living in a world that's not a real world, but a world where what counts is what people think of you or (if they) can click on you,"

she said. "Think of the implications for society if people worry more about what other people think about them than what they think about themselves." Her views were echoed by Sue Palmer, a literacy expert and author, who said girls in particular believe they are a "commodity they must sell to other people" on Facebook. She said: "People used to have a portrait painted but now we can more or less design our own picture online. It's like being the star of your own reality TV show that you create and put out to the world."

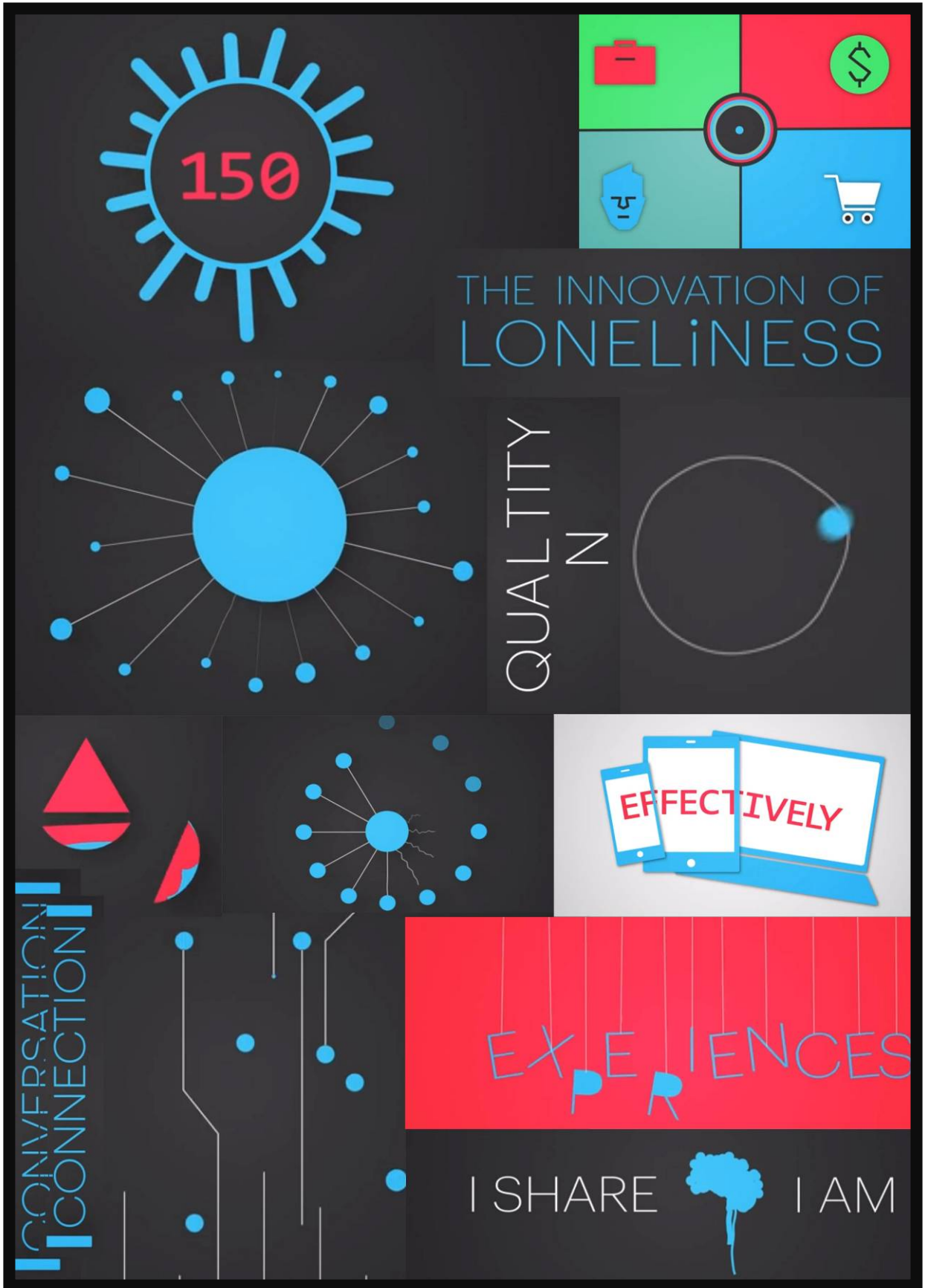
Mark Twain mythologized the adolescent's search for identity in the Huck Finn story, the on-the-Mississippi moment, a time of escape from an adult world. Of course, the time on the river is emblematic not of a moment but of an ongoing process through which children separate from their parents. That rite of passage is now transformed by technology. In the traditional variant, the child internalizes the adults in his or her world before crossing the threshold of independence. In the modern, technologically tethered variant, parents can be brought along in an intermediate space, such as that created by the cell phone, where everyone important is on speed dial. In this sense, the generations sail down the river together, and adolescents don't face the same pressure to develop the independence we have associated with moving forward into young adulthood. When parents give children cell phones—most of the teenagers I spoke with were given a phone between the ages of nine and thirteen—the gift typically comes with a contract: children are expected to answer their parents' calls. This arrangement makes it possible for the child to engage in activities—see friends, attend movies, go shopping, spend time at the beach—that would not be permitted without the phone. Yet, the tethered child does not have the experience of being alone with only him- or herself to count on. For example, there used to be a point for an urban child, an important moment, when there was a first time to navigate the city alone. It was a rite of passage that communicated to children that they were on their own and responsible. If they were frightened, they had to experience those feelings. The cell phone buffers this moment. Adolescent autonomy is not just about separation from parents. Adolescents also need to separate from each other. They experience their friendships as both sustaining and constraining. Connectivity brings complications. Online life provides plenty of room for individual experimentation, but it can be hard to escape from new group

demands. It is common for friends to expect that their friends will stay available—a technology-enabled social contract demands continual peer presence. And the tethered self becomes accustomed to its support. Traditional views of adolescent development take autonomy and strong personal boundaries as reliable signs of a successfully maturing self. In this view of development, we work towards an independent self capable of having a feeling, considering it, and deciding whether to share it. Sharing a feeling is a deliberate act, a movement toward intimacy. This description was always a fiction in several ways. For one thing, the “gold standard” of autonomy validated a style that was culturally “male.” Women (and indeed, many men) have an emotional style that defines itself not by boundaries but through relationships. Furthermore, adolescent conversations are by nature exploratory, and this in healthy ways. Just as some writers learn what they think by looking at what they write, the years of identity formation can be a time of learning what you think by hearing what you say to others. But given these caveats, when we think about maturation, the notion of a bounded self has its virtues, if only as a metaphor. It suggests, sensibly, that before we forge successful life partnerships, it is helpful to have a sense of who we are. But the gold standard tarnishes if a phone is always in hand. You touch a screen and reach someone presumed ready to respond, someone who also has a phone in hand. Now, technology makes it easy to express emotions while they are being formed. It supports an emotional style in which feelings are not fully experienced until they are communicated. Put otherwise, there is every opportunity to form a thought by sending out for comments. Sociologist David Riesman, writing in the mid-1950s, remarked on the American turn from an inner- to an other-directed sense of self. Without a firm inner sense of purpose, people looked to their neighbours for validation. Today, cell phone in hand, other-directedness is raised to a higher power. At the moment of beginning to have a thought or feeling, we can have it validated, almost prevalidated. Exchanges may be brief, but more is not necessarily desired. The necessity is to have someone be there. Technology does not cause but encourages a sensibility in which the validation of a feeling becomes part of establishing it, even part of the feeling itself.

Quoting the words of Sherry Turkle from her TED talk - Connected, But Alone:

"Sociological research indicates the maximum natural size of group for humans is roughly 150 members. Most humans are just incapable of knowing more than 150 people. Man is a social creature and the feeling of loneliness can drive him mad. The western and modern world sanctions individuality. The individuals measured by their personal achievements, having a career, wealth, a self image and consumerism. In this course of action, many of them lose their social and familial connections in favor of a self-actualisation ideal. As the social fabric in the western world weakens, it is not surprising that more and more people define themselves as lonely; and thus loneliness has become the most common ailment of the modern world. One of the possible reasons for the ailment is the online social network. In a world where time is money, in which our surroundings heavily pressurize us to achieve more and more, our social life becomes more tainted and demanding than ever before, and then there is technology, simpler, hopeful, optimistic, ever young. We become addicted to the virtual romance, disguised by the social network which supplies an impressive platform that allows us to manage our social life most effectively. However our fantasies about our substitutions are starting to take a toll. We are collecting friends like stamps, not distinct in quantity versus quality and converting the deep meaning in intimacy of friendship with exchanging photos and chat conversations. By doing so we are sacrificing conversations for mere connections. And so a paradoxical situation is created in which we claim to have many friends while actually being lonely. So what is the problem with having a conversation? Well, it takes place in real-time and you can't control what you are going to say and that is the bottom line. Texting, email, posting : all of these things let us present the self we want to be. We get to edit and that means we get to delete. Instead of building true friendships, we are obsessed with endless personal promotion, investing hours on end building our profile; pursuing the optimal order of words in our next message, choosing the pictures in which we look our best, all of which is meant to serve as a desirable image of who we are. We are expecting more from technology and less from each other, the social network are not only changing what we are doing but also who we are and that's because technology appeals to us most when we are most vulnerable.

We are vulnerable, we are lonely but afraid of intimacy. while social networks offer us three gratifying fences : (1) That we can put our attention wherever we want it to be. (2) and that we will always be heard and, (3) that we never have to be alone. The third idea is central to changing our psyches. It is shaping a new way of being, best way to describe it is - I share therefore I AM. We use technology to define ourselves by sharing our thoughts and feelings, even as we are having them, furthermore we are faking experiences, so we will have something to share, so we can feel alive. We slip into feeling that always being connected is going to make us feel less alone, but we are at risk because the opposite is true. If we are not able to be alone we are only going to know how to be lonely."



Visual Collage : " The Innovation of Loneliness ", Video by Shimi Cohen

We are constantly being zapped into a new dimension. It is a world which is not visible to us in a sense that its functioning, limits are all a mystery to the layman. We are following each other and the mandates, diktats being presented which quite intelligently are being instilled into our minds. The workings of it might seem similar to the agenda of religions through ages. Religion, where the lack of understanding of the mysteries of the real world are used to advantage of solidifying singular belief systems. Religion, quite like the internet age posit a grey existence, where one side giving rise to much destruction, anxiety, hatred; while being a great support structure for society and individual mental stability. **Can the religions of the old provide us with an antidote to the perils that have arisen with the rapid rise of technology?**

3. RELIGION

Religions around the world have been socially acquired. Majority of believers have been born into whatever tradition they now follow. Their commitments and behavior towards belief systems are largely tied to the accidents of birth, geography, and history. Belief systems are not acceptable unless they are shared by a social group. Religious behavior, beliefs and experiences are simply part of culture and cultural experiences, and hence are transmitted through generations. Religion is learned by the same processes of socialization as any other attitudes and beliefs. It is learned as a part of a given culture, which can be described as the human-made part of the environment. Believing is participating in a social system, belonging to a community, and achieving intimacy with real and imaginary others. The mechanism of social learning is the most important part for the maintenance of religion. Most individuals learn their religion in childhood, as a specific identity, within a specific community. They are 'cradle' Roman catholics or 'cradle' Moslems. For most individuals learning their religious identity is like learning their native language. And children have not much choice in learning religion then they have in acquiring their mother tongue. Religion, in most cultures, is ascribed, not chosen, and this identity label is impossible to remove in many of those cultures.

3.1 RELIGION – A BOON OR A BANE

People hold diverse and conflicting views on religion. Religion has been a central and contentious subject for leading philosophers and psychologists for a long time and still continues to be.

Religion, Freud believed, was an expression of underlying psychological neuroses and distress. At various points in his writings, he suggested that religion was an attempt to control the Oedipal complex, a means of giving structure to social groups, wish fulfillment, an infantile delusion, and an attempt to control the outside world.

"Religion is an attempt to get control over the sensory world, in which we are placed, by means of the wish-world, which we have developed inside us as a result of biological and psychological necessities." – Sigmund Freud, *Moses and Monotheism*, 1939.

"Devout believers are safeguarded in a high degree against the risk of certain neurotic illnesses; their acceptance of the universal neurosis spares them the task of constructing a personal one." Sigmund Freud, From *The Future of an Illusion*.

"The conflict between science and religion is in reality a misunderstanding of both. Scientific materialism has merely introduced a new hypostasis, and that is an intellectual sin. It has given another name to the supreme principle of reality and has assumed that this created a new thing and destroyed an old thing. Whether you call the principle of existence "God", "matter", "energy", or anything else you like, you have created nothing; you have simply changed a symbol. The materialist is a metaphysician *malgré lui*. Faith, on the other hand, tries to retain a primitive mental condition on merely sentimental grounds. It is unwilling to give up the primitive, childlike relationship to mind-created and hypostatized figures; it wants to go on enjoying the security and confidence of a world still presided over by powerful, responsible, and kindly parents. Faith may include a sacrificium intellectus (provided there is an intellect to sacrifice), but certainly not a sacrifice of feeling. In this way the faithful remain children instead of becoming as children, and they do not gain their life because they have not lost it. Furthermore, faith

collides with science and thus gets its deserts, for it refuses to share in the spiritual adventure of our age. Any honest thinker has to admit the insecurity of all metaphysical positions, and in particular of all creeds. He has also to admit the unwarrantable nature of all metaphysical assertions and face the fact that there is no evidence whatever for the ability of the human mind to pull itself up by its own bootstraps, that is, to establish anything transcendental. " Carl Jung.

3.2 POSITIVE ASPECTS OF RELIGION: SOCIAL CONSTRUCT

Many believe that religion is joy in fellowship, warmth and belonging. While we are proficient at bringing up cases of religious violence and conflicts, numerous instances of the opposite are quite important historically. Indian religious traditions show a potential for conflict, together with its total opposite. The Jain tradition of absolute respect for all forms of life has been an inspiration not only for Gandhi but also for (often secular) individuals and movements all over the world. Religion is an important and unique human adaptation defined by four recurrent traits: belief system incorporating supernatural agents and counterintuitive concepts, communal ritual, separation of the sacred and the profane, adolescence as a preferred developmental period for religious transmission. Although each of these traits vary across cultures and geographies, the belief system and communal rituals of all religions share common structural elements that maximize retention, transmission and affective engagement. The roots of these structural elements can be found in rituals where they serve to neuro-physiologically prime participants and ensure reliable communication. Religion's incorporation of music, chanting and dance intensifies such priming and extends impacts of rituals beyond dyadic interactions. Human use of ritual to conditionally associate emotion and abstractions creates the sacred; it also lies at the heart of symbolic thought. The brain plasticity of human adolescence offers a unique developmental window for the creation of sacred symbols. Such symbols represent powerful tools for motivating behaviours and promoting in-group cooperation. religious congregations become social circles that provide support and reduce stress in people's lives. In 1979, a published landmark study revolutionized understanding of the impact of the social environment on health. In a 9-year study of nearly 7,000 adults, Lisa Berkman and S. Leonard Syme found that the

most socially isolated people with the fewest social ties to others were at the highest risk of mortality. This finding persisted even when they adjusted for the health status of the respondents at the beginning of the study, as well as certain risky behaviors such as smoking and obesity, physical activity or the lack of it, and use of health services. One of the types of social ties these researchers included, along with family relationships, friendships, and community groups, was membership in a church or temple. Several later studies in Michigan, Georgia, and North Carolina also confirm the importance of social ties in general, including membership or attendance at religious services (**Social relationships and health**; House, Landis, and Umberson, 1988). Social groups are of benefit not only because they provide rules for living, but also because social groups nurture, care for, and support their members. "Support" can be anything from helping out with tasks around the home when someone is sick to assisting someone in finding a new job, a dentist, or a day care provider; or it could mean having someone to confide in and share feelings with. Religious congregations are excellent at providing social support for their members. A Duke University survey found that regular attendees at religious services report larger social networks overall, more frequent telephone and in-person contact, and a stronger feeling of support from all of the members of their social circles (Ellison and George, 1998). Religious congregations are unique social institutions in that their membership cuts across the entire life course; no other social institution regularly brings together the very old and the very young and everyone in between. Additionally, religious congregations offer rich social resources with a strong sense of ethics. A core belief of each of the world's religious traditions is that of concern for others less fortunate and the deliberate turning of attention away from ourselves and toward others who are in need. A study by Christopher Ellison, a researcher at the University of Texas, used data from a national survey of black Americans that underscores this observation (Ellison, 1992). Ellison posed the question "are religious people nice people?" and collected and analyzed interview data. Ellison's study was unique because he asked the interviewers their opinions about the interview itself; interviewers rated the respondents based on how much they had enjoyed interviewing them, how friendly the respondents were, and how open and engaged they were during the interview. The results made it clear

that religiously devoted individuals were evaluated in more positive terms compared to other respondents; people who prayed and read the Bible often, and those who saw religion as important in their daily lives were found to be more enjoyable to interview, more open, friendly, and less suspicious than the nonreligious members of the sample. This study demonstrates the pro-social, engaged attitudes of the religiously involved, and suggests that these friendly attitudes probably carry over to other relationships in life, not just those with survey interviewers who knock on the door. Spiritual and religious practices also offer us a transcendent time that the early twentieth century French sociologist Emile Durkheim called "sacred time." The experience of sacred time provides a time apart from the "profane time" that we live most of our lives in. A daily period of meditation, a weekly practice of lighting Sabbath candles, or attending worship services, or an annual retreat in an isolated, quiet place of solitude – all of these are examples of setting time apart from the rush of our everyday lives. Periods of rest and respite from work and the demands of daily life serve to reduce stress, a fundamental cause of chronic diseases that is still the primary causes of death in Western society. Transcendent spiritual and religious experiences have a positive, healing, restorative effect, especially if they are "built in," so to speak, to one's daily, weekly, seasonal, and annual cycles of living.

In Jung's view Religious symbols essentially perform the function of: allowing us to look at the unconscious, shield us from direct contact, offer new knowledge, compensate for what is missing, empower the transformation, bridge conscious and unconscious to lead towards wholeness, must be experienced rather than understood.

3.4 RELIGIOUS BEHAVIOUR, BELIEF AND EXPERIENCE: AN ANALYSIS

"Explanation of religious behaviour can be divided on the basis of three categories : there are hypothesis of origin, which attempt to explain the psychological sources of religion; there are hypothesis of maintenance, which attempt to explain why certain individuals, or

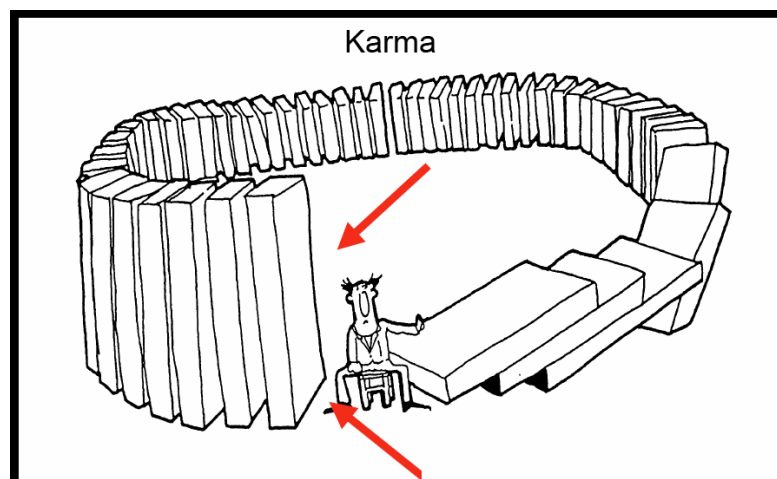
certain societies, hold certain belief systems; and there are hypothesis of consequence, which deal with the effects of religious behaviour for either individuals or social groups. Hypothesis of consequence, which deal with effects of religious behaviour, also serve as hypotheses of maintenance, which explain the continuity and survival of belief systems.

<i>Origin hypotheses</i>	<i>Maintenance hypotheses</i>	<i>Consequence hypotheses</i>
Neural factors Cognitive need Cognitive styles: evolutionary optimism Cognitive styles: religion as art Adjustment to anxiety Fear of death The effects of early childhood Projection and religious beliefs Super-ego projection and guilt Sexual motivation	Social learning Identity and self-esteem Deprivation explanations Personality factors	Personal integration Social integration

Origin hypotheses emphasize the significance of particular ideas, but it is possible that the original ideas, developed many centuries ago are less important today, and the forces of social maintenance still operate to keep the system going" - The Psychology of Religious Behaviour, Belief and Experience, By Benjamin Beit-Hallahmi

Humanity has been deemed as the 'questing beast' seeking answers to difficult, maybe unanswerable questions. Although humans have pursued this quest forever, they also possess the tendency to believe. This tendency has fostered even preferring cruelty to doubt. All belief systems serve 'to understand the world insofar as necessary'- Milton Rokeach, a social psychologist at Michigan State University. Human ideations impose order on the chaos of direct human sensory experiences. There is a ubiquitous tendency to organize our world according to simple cognitive structures. A need for cognitive closure has been hypothesized to operate in humans. This need for closure has been described as 'the desire for a definite answer on some topic, any answer as opposed to confusion and ambiguity'- Arie Kruglanski, from his book Lay epistemics and human knowledge, cognitive and motivational bases. The apparent human need for coherence or

coherence imagery, which seems vital for thinking and experience, takes the form of an imposition of causality and purpose as part of human perception- Fritz Heider, *The Psychology of Interpersonal Relations*. When faced with meaninglessness, humanity has the danger of despair and disintegration. The refusal to accept meaninglessness leads to a search for a framework of meanings and values, which provide overall sense of the world. Religion meets the need for a meaningful cosmos and a meaningful human existence. Religion is concerned with the meaning of those irrational aspects of life - evil, suffering and death - that are insoluble by science. Religion provides a socially shared set of cognitions which supply an interpretation of reality, a definition of self, and a source of directions for behaviour. Religion offers us ' the meaning of suffering, or, more exactly, difference between suffering which made sense and senseless suffering' - Arthur Koestler, *Darkness At Noon*. As observed in the native American cultures of Sioux, Navajo, and Hopi possess a belief in immanent justice. The universe is inherently just, and sickness or misfortune occur in retribution to failure to adhere to sacred prescriptions. Similarly the concept of Karma as seen in hindu religion, which refers to the principle of causality where intent and actions of an individual influence the future of that individual.



Religion, found in all cultures, may be a successful evolutionary adaptation, otherwise it would have been lost a long time ago. Evolutionary psychology predicts that this adaptation is universal because all humans have always had to face the same adaptive problems. Human evolutionary inheritance may include rituals which reduce aggression and produce awe and subordination, observed among animals. Such rituals might have also contributed to the development of religion. Donald Hebb, a Canadian psychologist,

hypothesized that higher mammals are vulnerable to emotional breakdown. The greater the development of intelligence, the greater the susceptibility to imagined dangers and unreasoning suspicion. Humans are protected by the protective cocoon of culture. Illusory beliefs, rituals, and art seem to have no survival value, but on reflection we realize that they may play an important role in relieving anxiety and allowing culture to survive.

NEURAL FACTORS

All humans like other animals, do have automatic neural responses to certain stimuli, which explain the effects of music, for example. Explanation based on the structure and functioning of nervous system as the biological substratum of religion suggest that humans are 'hard-wired' for non-rational experiences that are perceived as the building blocks of religion. Beyond 'normal' irrationality, neural factors seem responsible for exceptional religious behaviours, such as trances and visions. The temporal lobe of the brain has been identified as the location for neurological mechanisms which cause religious experiences .

4. RITUALS

4.1 HISTORY OF RITUALS AND RELIGIOUS SIGNIFICANCE

Recent archaeological findings indicate that it was ritual that civilized us. Unearthed at the site of Wadi Faynan, an archeological conundrum in southern Jordan, is a large amphitheatre which was probably used for public rituals. The important aspect of Wadi Faynan is that it is over 11,000 years old - older than settled agriculture; older even than civilization itself. A similar finding has been in southeastern Turkey, the temple of Gobekli Tepe is the world's oldest ritual sites. Quite like Wadi Faynan, Gobelki Tepe was also constructed over 11,000 years ago, long before villages, towns, or farms, they were built by hunter-gatherers. What they suggest is that our ancestors started gathering into larger communities for religious purposes, not



because of a stable food source. Klaus Schmidt, the archeologist who discovered Gobekli Tepe, argued that it was a pilgrimage site. Roaming hunter-gatherers converged at Gobekli Tepe for communal rituals. Over time, the crowds grew and the rituals became more elaborate. More elaborate rituals led to more impressive monuments, which required more workers to build. In feeding the workers and pilgrims, people – either intentionally or accidentally – became more selective about the wild grains and other plants they were collecting, leading to domestication. Indeed, genetic evidence indicates that the origins of domestic wheat are not far from Gobekli Tepe. Humans enact rituals for many purposes – to mark transitional moments, to commemorate important events, to celebrate triumphs and lament tragedies. But rituals are not passive players in these encounters. They transform us in turn, and their transformational power may have been strong enough to civilize us. Rituals could be perceived to be an effective story telling device, yet through history it has been an effective tool in converging community and strengthening belief systems. The dramatics of rituals invokes a certain experience amongst those involved, this experience makes it possible to spread the desired sociological and psychological impacts, helping build societies and moral codes.

4.2 SOCIAL SIGNIFICANCE OF RITUALS

In the modern spectrum of globalized life, liturgy is popularly conceived as little more than a collection of meaningless gestures and rituals. Since it doesn't fit into our scientific reference system, our tendency might be to reject it out right. The prevalence of a dichotomy in our society, where at one end are those who are very attached to the forms, the other extreme adamantly rejects everything even remotely resembling religious ritual. In truth, without our full awareness, we are immersed in a secular ritual all the time. Liturgy is simply a constant reaffirmation of the experience of a group of people. For example, the tweeting of politicians and response of the common public, there is a liturgical identification between the participants and the events they are involved in. Ritualistic behavior is an integral part of all life, not only humans, but every kind of life, from bees, cats, birds to insects, bacteria. There are monkeys who give a

particular scream when they see a leopard, and a different scream for a snake, other monkeys will react appropriately when they hear these different screams. Ritual is simply an inherent aspect of social interaction. The problem with modern culture comes about because we like to consider ourselves an essentially secular culture while, in fact, there is a theistic supposition underlying the way most of us understand how the universe works. This becomes evident in how we easily recognize sacred ritual or liturgy that does not address a divine being. Various features thought to be characteristic of ritualized behavior have been linked to social cohesion, cooperation and outgroup hostility. Social anthropologists have long observed that ritual participants are often unable to express why they carry out their distinctive procedures and ceremonies; while they know that ritualized actions can be invested with functional and symbolic properties, they tend to struggle to identify these properties. Indeed, the *causal opacity* of ritual—the fact that the relationship between actions and stated goals (if they are stated at all) cannot even in principle be specified in physical-causal terms—may well be the distinguishing characteristic of rituals over instrumental actions. Group rituals often involve *synchronous* actions, in which participants



perform the same actions with each other in unison. The effects of performing *synchronous* actions has recently been shown to increase cooperation, without necessarily increasing positive feelings among group members. Researchers looked at ritualized activities with varying degrees of behavioral synchrony – that is, the extent to which participants moved together in a complementary fashion (you do X as I do Y) or an exact fashion (we all do X together) or not at all.



They found that ritual activity that involved greater synchronous movements produced more generous contributions to a public fund as well as higher levels of perceived trust and emotional connectedness (“oneness”) among participants. Synchronous movement also produced a greater sense of shared sacred values among participants which appears to motivate other prosocial behaviors (i.e. increased generosity,

trusting, etc.). Numerous studies have shown how moving together increases liking, perceived similarity and “oneness” among the participants, which can in turn produce increased altruism. For example, in one study, participants engaged in either synchronous or asynchronous finger-tapping. Later, those who tapped synchronously reported having greater liking for one another and greater perceived similarity. In an additional part of the study, the participants were made aware of the fact that some study participants (the “victims”) had been assigned an onerous task and that they could relieve them of some of that task (i.e. they could behave altruistically toward them). Participants expressed significantly more compassion toward victims with whom they had earlier moved in synchrony and they extended greater altruism toward them. Statistical analyses indicated that it was the perceived similarity factor that played the more critical role (compared to the liking factor) in producing feelings of compassion and altruistic behavior. Research has shown, recalling one's guilt promotes prosocial behavior as exemplified in the catholic sacrament of confession. In a study, Participants who recalled an immoral act from their past reported stronger prosocial intentions and showed less cheating than people who recalled their past moral behavior.



DYSPHORICALLY AROUSING RITUALS

One particularly salient feature of rituals is that there are many examples all over the world of dysphorically arousing rituals; that is, rituals that provoke intensely negative emotional reactions in participants. While such rituals recur cross-culturally, they tend to be performed infrequently. However, the fact that they are so widespread requires explanation; this has led researchers to speculate about the functions of dysphoric rituals. Whitehouse's (1996) seminal case study on *rites of terror* provided initial evidence that dysphorically arousing rituals were associated with increased cohesion and tolerance within groups, as well as intensified feelings of hostility and intolerance towards the members of rival groups. Since





then, efforts have been made to investigate the effects of dysphoric arousal on social cohesion, and the psychological processes that mediate this relationship. Researchers studied the Hindu festival of Thaipusam on the small Indian Ocean island nation of Mauritius. The festival involves both low intensity ritual activity, such as praying and dancing, and high intensity ritual activity such as body piercing with needles, hooks, and skewers. Both high and low ritual intensity participants were allowed to make charitable donations to a public fund and they were queried about the strength of their emotional connection to their social groups. High intensity ritual participants made significantly greater charitable donations and identified more strongly with their Mauritanian nationality.

PAROCHIALY ALTRUISTIC BEHAVIOUR: RITUAL CHARACTERISTICS

Parochially altruistic behaviour refers to behaviours that benefit the ingroup (and/or punish the outgroup) at some cost to the self. The occurrence of parochial altruism in various contexts—war and martyrdom, to cite two acute examples—is puzzling, from an evolutionary perspective. Regardless of whether one takes a gene-selective or group-selective approach to evolutionary theory. It has therefore been suggested that rituals—at least some kinds of rituals—may serve to promote parochially altruistic behaviour. One way in which rituals might contribute to parochial altruism is that ritual participation might increase levels of *identity fusion* between the individual participant and his/her group. For highly *fused* individuals, their personal and social identities become functionally equivalent; parochially altruistic behaviour in highly fused individuals might no longer be a matter of sacrificing one's personal interests for the interests of the group, but simply a matter of serving personal interests by serving those of the group (and vice versa). Highly fused individuals are more willing to fight or die for their groups, especially when their personal or social identities are activated. This notion of identity fusion holds out the promise of explaining the relationship between ritual participation and parochial altruism; it potentially enriches and deepens our understanding of *social cohesion* and ritual's role therein. Humans, more so than any other species, need

other humans. Indeed, to truly be *human*, we must be connected to supportive, cooperative communities. Ritual is the evolutionary mechanism by which we have always created those communities. However, there is a potential dark side to this. Studies have also found that increased ritual participation can sometimes lead to greater out-group antagonism. Group competition was also a part of our evolutionary past. A future challenge in our use of ritual is that of promoting its best outcomes while minimizing its dangers.

4.3 A STUDY OF RITUALS: THE PROCESS

The important aspect of studying rituals is understanding the process that commonly applies to most of them. The way rituals are performed vary across religions and occasions, although there could be found common elements that help create a psychological impact. The design of ritual lies in the process of its performance. Rituals are a form of language that expresses many dimensions of our human condition, including our relationships to others and to our spiritual life. As actions done with others to share our common values, rituals help create community and mutual support. As a way of being mindful, they can bring a heightened awareness to aspects of our experience needing attention. Rituals often involve symbolism and speak to our subconscious. And when they are repeated frequently, they shape our dispositions. When done whole-heartedly, they help us discover and express some of our deepest feelings and aspirations. Rituals can be as ordinary as greeting people with a handshake and as extraordinary as an elaborate memorial ceremony that brings healing to grief. Rituals can transform the ordinary into something extraordinary as when people share a blessing and silence before eating. And the extraordinary can be seen as ordinary when universal compassion is regularly awakened through daily prayer or chanting of sacred texts. Rituals share many characteristics with poetry, theatre, and dance in evoking emotions, intuition, and new perspectives. Because rituals touch more aspects of our mind/heart than simple prose and didactic explanations, rituals, like the arts, can enrich our lives and engage the full range of our being. Rituals have much in

common with prayer, including how they impact participants. This connection is not surprising when prayer understood as ritualized speech. Rituals can strengthen and highlight the values, intentions, and experiences we have chosen to live by. This is particularly useful when other concerns cause us to forget or relinquish what is important to us. At major life transitions people often mark the new direction with a ritual, sometimes accompanied with vows as in wedding or ordination vows. Some rituals are journeys that have a beginning, middle and end. They are journeys in which participants undergo a number of possible changes, the most common being an entry into a special, sometimes sacred, location and time and then return to one's ordinary life. At times rituals can be transformative. The combination of setting an intention, heightened focus, emotional involvement, and embodied participation can enhance the effect rituals have. They can affirm what we know is true. They can translate what we understand into how we live, what we know into who we are. At times they can help people heal, develop, and complete psychological and spiritual processes better than any other method. This is particularly true in times of crises. An interesting way of appreciating the value of ritual is to observe how they can help children feel safe and cared for. Daily rituals give a sense of familiarity and regularity in a life that a young child may feel is confusing and rapidly changing. Marking a significant change with a ritual can ease the transition and reassure the child of their connection to their family. This can be as simple as having a "cookie party" to mark the first day of kindergarten.

THE GRAMMAR AND VOCABULARY OF RITUAL

Rituals are most effective when the person(s) creating or officiating them does so whole-heartedly. To lead or participate with hesitation or reluctance diminishes a ritual's power. In order to better understand a ritual it is helpful to know their most common structure and elements. In a sense, the structure of ritual is its grammar and what fills the structure is the vocabulary.

Simple rituals involving a single activity like a bow or a blessing do not have a temporal structure. It is rather the elaborate rituals that take participants on a journey which have structure. The simplest way of understanding the structure is dividing it up into a beginning, middle, and an ending. Each of these three phases has its own function.

THE BEGINNING OF A RITUAL:

The beginning sets the stage for the middle. Its primary function is to differentiate the ritual activity from the participants' ordinary activities and concerns. This creates a focus and a context for the main body of the ritual.

Sometimes this is accomplished by going to a special place such as a temple. Sometimes it is achieved by demarking a special, perhaps sacred, place and time. For an impromptu ritual this can be done quickly by having the participants form a circle. A meaningful, sacred object could be placed in the middle of the circle or in a prominent place. Other things that can contribute to creating a focused environment is sprinkling the space with water, burning incense, or lighting a candle. In some rituals the participants clearly let go of activities and identities associated with daily life. This can be as simple as putting down anything people are holding or taking off their shoes. In some ceremonies a period of silence, meditation, or time alone helps give power to the next phase of the ritual.



Often the beginning of a ritual involves saying something that sets the intention and context for the ritual. This can be stories or descriptions of what is left behind, what the focus of the ritual is about, or what the intention is going to be. Sometimes participants are quiet while an officiant does all the speaking; sometimes participants are asked simple questions that prepare them for what is going to happen next such as "Are you ready?" or "Are you ready to do (X)?"

THE MIDDLE OF A RITUAL

The middle part of a ritual is sometimes referred to as a period of transition. It is a transition between leaving one's ordinary life and then returning. Sometimes it is a period between leaving one identity or way of being and starting a new one. It can be seen as blank slate ready for something new. It is time when participants are open and willing to hear or do something different.

The middle phase is when the main purpose of the ritual is enacted or evoked. The purpose can be to:

- offer a blessing
- connect to what is sacred
- remember what is important
- heal
- set an intention
- make a commitment
- mark a new beginning, initiation, or transition
- welcome or honour something or someone
- let go of something, leave something behind, or say good-bye
- evoke something meaningful, *e.g.* strength, support, courage, patience, love, compassion, wisdom
- facilitate forgiveness, reconciliation, or speaking the truth
- prepare for upcoming events
- receive particular wisdom teachings
- tell one's story
- celebrate

THE ENDING OF A RITUAL

Once the main intention of a ritual is finished, it is useful to have a time focused on bringing it to a close and helping the participants to integrate the ritual activity back into the life they left behind. The ending is a time to restate or appreciate the intention of the ritual and explicitly connect it to the life one is returning to. An object associated with the ritual and its purpose can be given to the participants to accompany them back into their life and serve as a reminder.

The most common Buddhist element at the end of a ritual is the dedication of merit. The ending is also a time to offer appreciation for the ritual and acknowledge the people involved.

It can be helpful to give a ritual a definitive end. This can be a final bow, the ringing of a bell, or the enthusiastic proclamation, "Sadhu, Sadhu, Sadhu", usually translated into English as "Excellent, Excellent, Excellent."

4.4 PSYCHOLOGY OF RITUALS: PRAYERS

Psychological perspectives on motivations and effects of prayer consider how it relates to religious practices and experiences, but especially as these involve what transpires within the praying subject with respect to cognitive, emotional, relational, and behavioral states. Some psychological perspectives, particular those tied to Freudian thought, view prayer negatively. Like all religious beliefs and practices, it is said to involve an infantile form of seeking wish fulfillment. In this view, one pursues in prayer the presence and provision of an all powerful deity that compensates for human limitations and unmet needs or desires. As we look to parents to meet our needs in childhood, we look to God as we age. Such pursuit is viewed negatively because of its basis in irrational thinking and delusion, and its appeal to superstition or magical powers. Other psychological perspectives hold a more positive view of prayer and stress its potential benefits for human wellbeing. Some like William James and other psychologists of religion who were his contemporaries have suggested that prayer is "the religious experience par excellence".

Others have found that prayer is a common source for religious experience, second only to music. Prayer promotes a particular type of consciousness, including inward communion marked by earnestness, openness, and expectancy; and something is “transacted” in prayer that involves “spiritual energy” and which can promote therapeutic gain. Moreover, prayer may lead to enhanced self-awareness, which can include a deeper consideration of held values, ideals, goals, and responsibilities (Jung, 1961/ 1989). Prayer can also promote active cognitive coping and cognitive restructuring, particularly as understood by principles of cognitive therapy. In this view, how one feels and acts is directly related to how one thinks. As one becomes more aware of one’s thoughts, patterns of thinking, and how these inform one’s feelings and behaviors, one may then alter how one feels and behaves by altering what and how one thinks. Prayer has the capacity to foster thinking, and thus feeling and behaving, in more faithful, peaceful, healthy, and whole ways. Seeking a type of cognitive restructuring through prayer parallels what occurs in various methods employed in a therapeutic setting.

4.5 PSYCHOLOGY OF RITUALS: AFFECT REGULATION AND CONTEMPLATIVE PRACTICE

Affect is a term used in psychology to denote the broad field of emotional and mood based experience of the human subject, and is a concept deployed in the post structural theory of Deleuze and Guattari and related fields of social and cultural theory, to describe the means of visceral communication which invests the experience of relationship between an organism and its environment with meaning, in the broadest possible sense.

For the psychoanalytic psychologist Silvan Tomkins, who developed what has become known as “affect theory,” affect can also be understood as an important factor in motivation, in that it is generative of stimuli and also mediates the complex human biofeedback system in an attempt to sustain homeostasis. The

adoption of a religious or spiritual practice can be understood to be motivated by the human need to optimise positive affect and ameliorate negative affect to achieve harmonious bio-psycho-social functioning. Mindfulness based stress reduction or MBSR and mindfulness based cognitive therapy or MBCT, are two forms of therapeutic affective self-regulation which deploy Buddhist meditation techniques and yoga exercises to enhance affective selfmanagement. They have been demonstrated to be particularly effective interventions in mood disorders such as recurring depression and substance abuse problems, which are often rooted in misguided attempts to use alcohol, drugs and/or food to regulate emotions and mood. More recently, a new type of intervention designed to regulate affect called "analytic meditative therapy" has been described by Harrison (2006) as a non-dual psychotherapy rooted in the Tibetan Buddhist practices of Dzogchen and Mahamudra, which enables relaxed contact with absolute reality and mental healing to occur spontaneously through contemplative resting in non-dual mental space. Such an intervention embraces the tendency of human affect to achieve equilibrium when given the "mental space" to do so. Certain skills in contemplative discipline are required to create the mental space that enables this to occur. The above descriptions of the role of affect in the generation and mediation of psychological states, including spiritual and religious experience, is made more interesting by research that demonstrates the converse relationship also exists. Ancient contemplative practices generate and mediate affect in predictable and repeatable ways, with meditation and breathing techniques now being used to enhance psychological well-being as highly effective therapeutic interventions in the field of emotional health.

MEDITATION

There are many systems of meditation that widely differ from one another in their procedures, contents, objects, beliefs, and goals. Given these differences, it is not surprising that research has shown they have different subjective and objective effects.

Meditation techniques differ with regard to the sensory and cognitive processes they require, their neurophysiological effects, and their

behavioral outcomes. Travis and Shear have identified three types of meditation practices, classified according to their EEG signatures and the corresponding cognitive processes they entail (Travis & Shear, 2010).

1. Focused Attention techniques. The first type, which includes focused attention or concentration techniques, is characterized by EEG in the beta-2 (20-30 Hz) and gamma (30-50 Hz) frequency bands, which are associated with voluntary sustained control of attention to keep it focused on the object of meditation.

2. Open Monitoring techniques. The second type includes open monitoring or mindfulness-based techniques, which involve dispassionate non-evaluative monitoring of ongoing experience and are characterized by frontal theta (5-8 Hz) EEG, and perhaps occipital gamma (30-50 Hz) EEG.

3. Automatic Self-Transcending techniques. The Transcendental Meditation technique falls within the third category, automatic self-transcending meditation, which is associated with alpha-1 (7-9 Hz) EEG, characteristic of reduced mental activity and relaxation. Whereas concentration and open monitoring meditations both require some mental effort (i.e., holding attention on its object or maintaining a stance of open monitoring, respectively), automatic self-transcending meditation is the effortless transcending of the meditation process itself (Travis, Arenander, & DuBois, 2004; Travis et al., 2010). It is said to automatically lead to the experience of "consciousness itself", the screen of awareness without any objects of awareness, a low-stress state called transcendental or pure consciousness (Travis & Pearson, 2000). Studies have found that the Transcendental Meditation technique increases alpha coherence and synchrony as a state and trait, indicating increased stability of the phase relationship between the collective neural activity in the left and right hemispheres and frontal and posterior brain areas

Basic EEG Research. Over the last decade, basic research has found that alpha coherence and synchrony functionally bind distributed cortical neuronal assemblies needed to carry out a wide range of cognitive tasks—attentional, semantic, memory, and learning—as well as basic sensory and motor tasks. Whereas beta and gamma EEG coherence have a role of coordinating local, proximal cortical areas during cognitive processing, alpha coherence is essential for large-

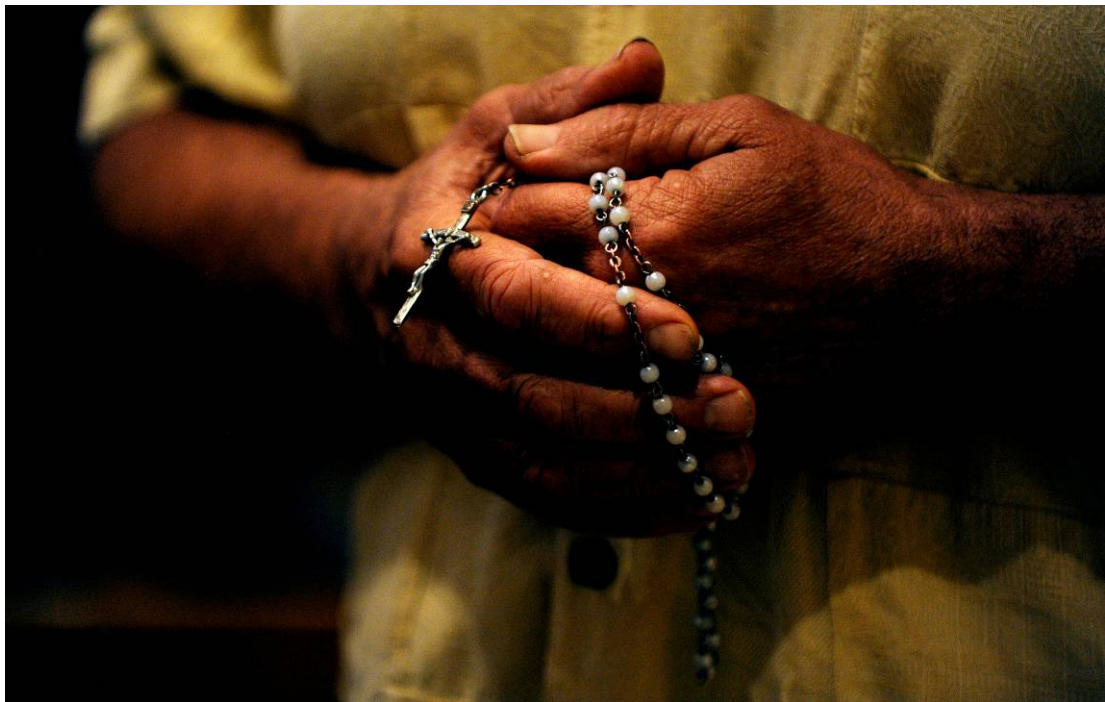
scale neural communication and integration between distant cortical areas that are necessary for conscious awareness and the meaningful interpretation of experience. EEG coherence during the Transcendental Meditation technique is positively correlated with intelligence, creativity, concept learning, and moral reasoning, as well as with reduced anxiety, emotional stability, and mental health.

traditional meditation procedures can differ with regard to the mental faculties they use (attention, feeling, reasoning, visualization, memory, bodily awareness, etc.), the way these faculties are used (effortlessly, forcefully, actively, passively), and the objects they are directed to (thoughts, images, concepts, internal energy, breath, subtle aspects of the body, love, God). They also often differ strongly with regard to how they relate to questions of belief. Some systems emphasize the need to hold particular philosophical, metaphysical and/or religious views; others emphasize complete independence of all matters of belief. Different meditation traditions also often have very different goals, ranging from physical health and mental well being, to harmony with nature, higher states of consciousness and experience of God.

Zen Buddhist practices are likely to use concentration, whether directed perceptually towards one's breathing, or conceptually towards paradoxes (koans) that defy intellectual resolution. Taoist practices emphasize circulation of energy throughout channels of the body. Transcendental Meditation uses relaxed attention to special sounds (or mantras) repeated silently within the mind. Yoga adds many other procedures and objects, such as concentration on energy centers in the body (chakras), the "light" of the mind, and attributes of God. Theravada Buddhism emphasizes dispassionate observation of the impermanence of sensations, thoughts, and whatever else is meditated on, including the self itself. Tibetan Buddhist Tsongkhapa emphasizes reasoned deconstruction of the reality of objects experienced in meditation, as well as concentrative practices to quiet the mind. Integral Yoga emphasizes attending to a sense of seeking, and remembering calmness and divinity both during and after meditation. Kriya yoga uses techniques of concentration on breath, and on God. Sufism follows the inner feeling of love for God. And Christian Centering Prayer uses a word of love to stimulate receptiveness to God within.

PRAYER BEADS

Prayer beads are used by members of various religious traditions such as Hinduism, Buddhism, Christianity, Islam, Sikhism and the Bahá'í Faith to count the repetitions of prayers, chants or devotions, such as the rosary of Virgin Mary in Christianity, and dhikr (remembrance of God) in Islam. The number of beads varies by religion or use. Islamic prayer beads, called "Misbaha" or "Tasbih", usually have 99 or 33 beads. Buddhists and Hindus use the Japa Mala which usually has 108 beads, or 27 which are counted four times. Baha'i prayer beads consist of either 95 beads or 19 beads strung with the addition of five beads below. The Sikh Mala also has 108 beads. The secular Greek "komboloi" has an odd number of beads—usually one more than a multiple of four, e.g. $(4 \times 4) + 1$, $(5 \times 4) + 1$. Roman Catholics use the "Rosary" (Latin "rosarium", meaning "rose garden") with 54 with an additional five beads whereas Eastern Orthodox Christians use a knotted "Rosary" with 100 knots, although "prayer ropes" with 50 or 33 knots can also be used. Although Anglo-Catholics have used the Dominican rosary since the 19th century, in the 1980s Rev. Since the beads are fingered in an automatic manner, they allow the user to keep track of how many prayers have been said with a minimal amount of conscious effort, which in turn allows greater attention to be paid to the prayers themselves.



4.6 RITUALS IN BUDDHISM

Often enough Western Buddhists have seen rituals as superficial and as a distraction from the “real” work of practice. This view overlooks the way in which rituals are a practice as much as meditation. In the past and in the present, there are many Buddhists for whom ritual practices have been their primary way of inner transformation. For example, as one of the most common Buddhist rituals, bowing can be powerful and evoke and strengthen a person’s reverence, gratitude, humility, and ability to let go self-centeredness.

Some English translations of the Buddha’s teachings list ‘adherence to rites and rituals’ as an attachment one must overcome. This has led some Buddhist to reject all ritual. But the Buddha’s concern was the attachment not the rituals. Furthermore, the appropriate and literal translation into English is ‘adherence to precepts and religious observance’ – a much broader category than ‘rites and rituals’. As important as precepts and religious observances are in Buddhism, they alone cannot liberate people. To rely on them for liberation is a hindrance to liberation. But precepts, religious observances and rituals can have an important role for other purposes. Not least of these is preparing the ground for the deep letting go which is what is required for liberation.

Therefore, one of the important functions of Buddhist rituals is to strengthen people’s connection to the Dharma and to the intention, respect, understanding, community, and experiential dimension associated with the Dharma. While feeling a stronger connection to the Dharma can be meaningful in and of itself, it can also fuel a person’s practice when it is challenging to do. Rinzai Buddhism emphasizes the use of **koans**, paradoxical puzzles or questions that help the practitioner to overcome the normal boundaries of logic. Koans are often accompanied by shouts or slaps from the master, intended to provoke anxiety leading to instant realization of the truth.

Buddhism incorporates a variety of ritual practices. Although The practice of meditation is central to nearly all forms of Buddhism, and it derives directly from the Buddha’s experiences and teachings. In addition to meditation, the Mahayana schools of Buddhism have

developed a variety of other ritual and devotional practices, many of which were inspired or influenced by the existing religious cultures of India, China, Japan, Southeast Asia, and Tibet. Some of them being :

- Meditation - Mental concentration and mindfulness
- Mantras - Sacred sounds
- Mudras - Symbolic hand gestures
- Prayer Wheels - Reciting mantras with the turn of a wheel
- Monasticism
- Pilgrimage - Visiting sacred sites
- Veneration of Buddhas and Deities

" All that we are is the result of what we have thought:
it is founded on our thoughts, it is made up of our thoughts.
If a man speaks or acts with a pure thought,
happiness follows him, like a shadow that never leaves him."

--Gautama Buddha, *Dhammapada*

Meditation in Buddhism have many forms, the main two types are vipassana (insight) and samatha (tranquility).



TRANQUILITY MEDITATION (SAMATHA)

The basic purpose of samatha or tranquility meditation is to still the mind and train it to concentrate. The object of concentration (kammattana) is less important than the skill of concentration itself,

and varies by individual and situation. One Pali text lists 40 kammattanas, which include:

- devices (like color or light)
- repulsive things (like a corpse)
- recollections (such as sayings of the Buddha)
- virtues (like loving-kindness)

The goal of samatha meditation is to progress through four stages (dhyanas):

- Detachment from the external world and a consciousness of joy and tranquility;
- Concentration, with suppression of reasoning and investigation;
- The passing away of joy, but with the sense of tranquility remaining; and
- The passing away of tranquility also, bringing about a state of pure self-possession and equanimity.

INSIGHT MEDITATION (VIPASSANA)

Many of the skills learned in tranquility meditation can be applied to insight meditation, but the end goal is different. As its name suggests, the purpose of insight meditation is the realization of important truths. Specifically, one who practices vipassana hopes to realize the truths of impermanence, suffering and "no-self."

The practice of insight meditation centers around the notion of mindfulness. Mindfulness is related to, but different than, concentration. When one is concentrating, one's entire focus is on the object of concentration in an almost trancelike manner - whether the object is a lotus, one's own breathing, or a television program. But to be mindful of something is to think about it and observe it carefully. It is not only to focus on a television program, but to comprehend its content. It is not only to block out everything but breathing; it is to observe what the breathing is like and attempt to learn something about it.

Gaining the skill of mindfulness is the first step of insight meditation. The most common methods prescribed to develop mindfulness are: walking mindfulness, sitting mindfulness, and mindfulness of daily activities.

Walking mindfulness is regularly practiced in monasteries and retreats, especially in the Theravada tradition. But to practice walking mindfulness anywhere, one finds a quiet place to walk, takes a moment to relax, then attempts to focus on the myriad movements and sensations associated with walking. If the mind strays to other things, this is to be mindfully noted, then put aside to again focus on the walking. According to Buddhists who practice this technique, as one progresses in skill it becomes easy to "lose oneself" in the activity and walk for a long time without it feeling like more than a few minutes have passed. This can be very blissful in itself, but it also brings the practitioner closer to insight into the fundamental truths of "no-self" and impermanence.

Sitting meditation is very similar to walking meditation, except now the focus is on the breath instead of the walking. The sitting meditator attempts to focus entirely on his or her own breath as it moves in and out, and the abdomen as it moves up and down. As in walking meditation, as other thoughts distract, these are to be mindfully recognized, then put aside. With practice, the meditator is distracted less and notices more about the object of observation, the breath. This practice certainly brings about tranquility, but again, the ultimate goal is to begin to realize for oneself the Buddhist truths of no-self, suffering and impermanence.

Finally, the practice of mindfulness in everyday activities applies the skills learned in walking and sitting meditation to everything one does: eating, washing dishes, washing, etc. As this skill is developed, one lives increasingly in the present moment and participates more fully in everything he or she does. One Buddhist master who was accomplished in the practice of mindfulness said simply, "When I eat, I eat. When I sleep, I sleep."

LOVING-KINDNESS MEDITATION (METTA BHAVANA)

Loving-kindness is a central virtue of Buddhism, and loving-kindness meditation (metta bhavana) is a way of developing this virtue. It is a practice that is seen as supplemental or complementary to other forms of meditation.

The purpose of loving-kindness meditation is to develop the mental habit of altruistic love for the self and others. It is said to "sweeten the mind." There are, of course, a variety of ways to practice metta bhavana, but it generally progresses through three stages:

- Specific pervasion
- Directional pervasion
- Non-specific pervasion

In the first stage, the practitioner focuses on sending loving-kindness to specific people, in the following order:

- Oneself
- An admired, respected person (like a spiritual teacher)
- A beloved person (like a close friend or family member)
- A neutral person – someone familiar but who evokes no particular feelings (like a person who works in a local store)
- A hostile person (like an enemy or someone who causes the practitioner difficulty)

Beginning with oneself, the meditator seeks to evoke feelings of loving-kindness for each person in the above list. Tools for accomplishing this include:

- Visualization – imagine the person looking joyful and happy
- Reflection – reflect on the person's positive qualities and acts of kindness they have done
- Mantra – repeat silently or out loud a simple mantra like "loving-kindness"

When this first stage has been accomplished even for hostile persons, one moves on the next stage, Directional Pervasion. In this stage, the practitioner systematically projects feelings of loving-kindness in all geographical directions: north, south, east and west. This can be done by bringing to mind friends and like-minded communities in various cities around the world. The last stage of metta bhavana is "Non-Specific Pervasion," which simply means radiating feelings of

universal, unconditional love in everyday life. This stage is often a natural outcome of accomplishment of the other stages.

MUDRAS are symbolic gestures, used symbolically in Buddha images and in practice to evoke particular ideas or buddhas in the mind during Buddhist meditation or ritual. Like symbols held by saints in Christian art or by gods in Hindu art, Buddhist mudras indicate the identity of a Buddha or a particular scene being depicted. Mudras are also used in ritual meditation, especially in Tibetan Buddhism, to generate forces that invoke a particular Buddha or deity. While there are a large number of esoteric mudras, there are ten main ones, of which five are most commonly used in Buddha images. Each of the Five Dhyani Buddhas is assigned one of the five mudras, with which they are invariably depicted in art



Vajrapradama Mudra - *Mudra of Unshakable Self Confidence*



Darmachakra Mudra - *continuous energy (symbolized by a wheel/chakra) of the cosmic order*



Uttarabodhi Mudra - *mudra of supreme enlightenment*



Vitarka Mudra - *evokes the energy of teaching and intellectual discussion*



Dhyana Mudra - *energy of meditation, deep contemplation and unity*

SINGING BOWLS

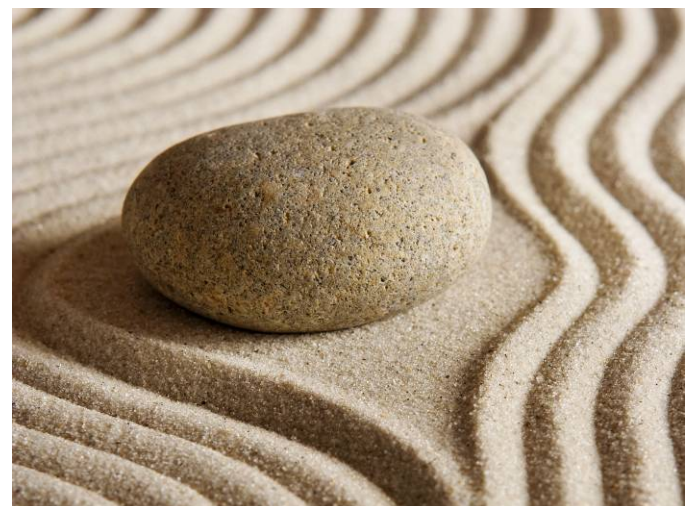
are a type of bell, specifically classified as a standing bell. Rather than hanging inverted or attached to a handle, singing bowls sit with the bottom surface resting, and the rim of singing bowls vibrates to produce sound characterized by a fundamental frequency (first harmonic) and usually two audible harmonic overtones (second and third harmonic). In Tibetan Buddhist practice, singing bowls are used as a signal to begin and end periods of silent meditation. Singing bowls are used worldwide for meditation, music, relaxation, and personal well-being.



A **PRAYER WHEEL** is of a hollow metal cylinder, often beautifully embossed, mounted on a rod handle and containing a tightly wound scroll printed with a mantra. Prayer wheels are used primarily by the Buddhists of Tibet and Nepal, where hand-held prayer wheels are carried by pilgrims and other devotees and turned during devotional activities. According to Tibetan Buddhist belief, spinning a prayer wheel is just as effective as reciting the sacred texts aloud. This belief derives from the Buddhist belief in the power of sound and the formulas to which deities are subject. For many Buddhists, the prayer wheel also represents the *Wheel of the Law* (or *Dharma*) set in motion by the Buddha. The prayer wheel is also useful for illiterate members of the lay Buddhist community, since they can "read" the prayers by turning the wheel. Prayer wheels come in many sizes: they may be small and attached to a stick, and spun around by hand; medium-sized and set up at monasteries or temples; or very large and continuously spun by a water mill. Prayer wheels at monasteries and temples are located at the gates of the property, and devotees spin the wheels before passing through the gates. The cylinder contains a sacred text written or printed on paper or animal skin. These texts might be sutra or invocations to particular deities (*dharani* or *mantras*).



One of the rituals in Zen Buddhism, which has transcended into modern popular culture is the art of **ZEN GARDENS**. Zen gardens are dry gardens comprising of rocks, water features, moss, pruned trees and bushes, and uses gravel or sand that is raked to represent ripples in water. In Buddhist monasteries, monks regularly rake the sand and compose formations with the rocks. They were intended to imitate the intimate essence of nature, not its actual appearance, and to serve an aid to meditation about the true meaning of life. The act of raking the gravel into a pattern recalling waves or rippling water has an aesthetic function. Zen priests practice this raking also to help their concentration. Achieving perfection of lines is not easy. Rakes are according to the patterns of ridges as desired and limited to some of the stone objects situated within the gravel area. Nonetheless often the patterns are not static. The rake represents how we use our thoughts and make them into patterns. Developing variations in patterns is a creative and inspiring challenge. Stone arrangements and other miniature elements are used to represent mountains and natural water elements and scenes, islands, rivers and waterfalls. Stone and shaped shrubs are used interchangeably. The tranquil scenes were often used as meditation aids, as gazing upon them and thinking about the peace and order represented within could aid one in bringing about such qualities in their mind. It is believed that the stillness of the "water" represents the peace and tranquility of the mind.



4.7 RITUALS IN HINDUISM

Hindu literature it is often seen to integrate spirituality and science. It is mentioned in the 40th chapter of 'Yajurveda', to use scientific knowledge for solving problems in our life and use spiritual knowledge for attaining immortality through philosophical outlook. The 'Aacharaas' are considered the customs and rituals in Hinduism. They are to be followed based on their merits available from self experience. It is mentioned in the 'Smruthies' that a person can get only one quarter of knowledge from the teacher, another quarter by analysing self, one quarter by discussing with others and last during the process of living by method addition, deletion, correction and modification of already known Aacharaas or new Aacharaas.

Aacharaath labathe hi ayu,
 aacharaath dhanamakshayam,
 aacharaath labathe suprajaa,
 aachaaro achanthya lakshmanam.

Translated as: Aacharaas are followed for the psychological health and long life; Aacharaas are followed for prosperity and wealth; aacharaas are followed for strong family and social bondage; and following aacharaas give a fine personality, dharmic outlook and vision.



LIGHTING OF LAMP

In almost every Indian home a lamp is lit daily before the altar of the Lord. In some houses it is lit at dawn, in some, twice a day – at dawn and dusk – and in a few it is maintained continuously - Akhanda Deepa. All auspicious functions commence with the lighting of the lamp, which is often maintained right through the occasion. Light symbolizes knowledge, and darkness - ignorance. The Lord is the "Knowledge Principle" (Chaitanya) who is the source, the enliver and the illuminator of all knowledge. Hence light is worshiped as the Lord himself. Knowledge removes ignorance just as light removes darkness. Also knowledge is a lasting inner wealth by which all outer achievement can be accomplished. Hence we light the lamp to bow down to knowledge as the greatest of all forms of wealth. Why not light a bulb or tube light? That too would remove darkness. But the traditional oil lamp has a further spiritual significance. The oil or ghee in the lamp symbolizes our vaasanas or negative tendencies and the wick, the ego. When lit by spiritual knowledge, the vaasanas get slowly exhausted and the ego too finally perishes. The flame of a lamp always burns upwards. Similarly we should acquire such knowledge as

to take us towards higher ideals.

PROSTRATE BEFORE PARENTS AND ELDERS

Indians prostrate before their parents, elders, teachers and noble souls by touching their feet. The elder in turn blesses us by placing his or her hand on or over our heads. Prostration is done daily, when we meet elders and particularly on important occasions like the beginning of a new task, birthdays, festivals etc. In certain traditional circles, prostration is accompanied by abhivaadana, which serves to introduce one-self, announce one's family and social stature. It is a way of humbly acknowledging the greatness of another. When we prostrate with humility and respect, we invoke the good wishes and blessings of elders, which flow in the form of positive energy to envelop us. This is why the posture assumed whether it is in the standing or prone position, enables the entire body to receive the energy thus received.

WEARING OF MARKS (TILAK, POTTU AND THE LIKE) ON THE FOREHEAD

The tilak or pottu invokes a feeling of sanctity in the wearer and others. It is recognized as a religious mark. Its form and colour vary according to one's caste, religious sect or the form of the Lord worshipped. In earlier times, the four castes (based on varna or colour) - Brahmana, Kshatriya, Vaishya and Sudra - applied marks differently. The brahmin applied a white chandan mark signifying purity, as his profession was of a priestly or academic nature. The kshatriya applied a red kumkum mark signifying valour as he belonged to warrior races. The vaishya wore a yellow kesar or turmeric mark signifying prosperity as he was a businessman or trader devoted to creation of wealth. The sudra applied a black bhasma, kasturi or charcoal mark signifying service as he supported the work of the other three divisions. The tilak covers the spot between the eyebrows, which is the seat of memory and thinking. It is known as the Ajna Chakra in the language of Yoga. The entire body emanates energy in the form of electromagnetic waves - the forehead and the subtle spot between the eyebrows especially so. That is why worry generates heat and causes a headache. The tilak and pottu cools the forehead, protects

and prevents energy loss. Sometimes the entire forehead is covered with chandan or bhasma.



RINGING THE BELL IN A TEMPLE

The ringing of the bell produces what is regarded as an auspicious sound. It produces the sound Om, the universal name of the Lord. Even while doing the ritualistic aarati, we ring the bell. It is sometimes accompanied by the auspicious sounds of the conch and other musical instruments. An added significance of ringing the bell, conch and other instruments is that they help drown any inauspicious or irrelevant noises and comments that might disturb or distract the worshippers in their devotional ardour, concentration and inner peace.

FIRE RITUALS (HOMA)

Fire rituals while being an important part in Hinduism are fairly prevalent in Buddhism too. A consecrated fire is the central element of Homa rituals. The consecrated fire forms the focus of devotions, it is often maintained on specific types of dung, wood, dried coconut

(copra) and/or other combustibles. Various offerings are made to the fire as part of the ritual. The procedure and items offered to the fire vary by what occasions the ceremony, or by the benefit expected from the ritual. Procedures invariably involve -

- the kindling and consecration of the sacrificial fire;
- the invocation of one or more divinities; and,
- the making of offerings (whether real or visualized) to them with the fire as via media, amid the recitation of prescribed prayers and mantras.

Ritual of consecrated fire is unique to Vajrayana and Esoteric Buddhism and is perhaps also the most mystical and cognitively powerful. It stems from the Vedic Agnihotra Ritual and is performed by qualified priests and acharyas for the benefit of individuals, the state or all sentient beings in general. The consecrated fire is believed to have a powerful cleansing effect spiritually and psychologically. The ritual is performed for the purpose of destroying negative energies, detrimental thoughts and desires, and for the making of secular requests and blessings; these are in the form of pieces of lumber with prayers written down by individuals. In most Shingon temples, this ritual is performed daily in the morning or the afternoon, and is a requirement for all acharyas to learn this ritual upon entering the priesthood. Larger scale ceremonies often include the constant beating of taiko drums and mass chanting of the mantra of Acalanatha by priests and lay practitioners. Flames can sometimes reach a few meters high. The combination of the ritual's visuals and sounds can be trance-inducing and make for a profound experience.



5. BEHAVIORAL IMPACTS THROUGH INTERACTION DESIGN

Rituals have had significant role in creating experiences enabling behavioral changes towards personal or societal good.

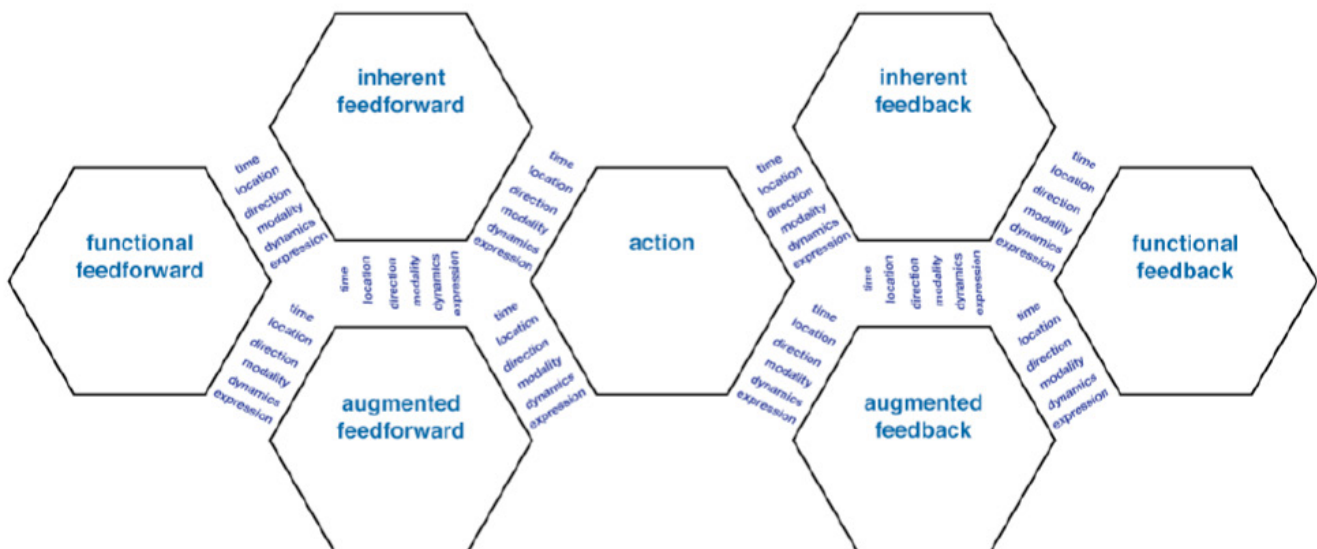
Experience cannot be designed directly, but may be approached through the role that artifacts play in affecting our behavior. In the design of intelligent products and systems, the consideration that products affect behavior is of even more relevance, as the artifacts can adapt dynamically to the people interacting with them. In this regard, persuasive computing is becoming relevant to interaction designers who want to explore how design can address societal issues by transformation of behavior. Verbeek analyses the same influence in terms of technological mediation from two perspectives: mediation of perception and mediation of action. Artifacts on one hand can transform how we perceive the world; on the other hand they can translate how we are able to act in the world. In this context, a script can be understood as a specific aspect of technological mediation, where things mediate actions as material things, not as immaterial signs. Such material relationships have been part of the embodied interaction approach, Embodied interaction is defined as the creation, manipulation and sharing of meaning through engaged interaction with artefacts, together with other concepts from phenomenology. In this approach Heideggers' concept of ready-to-hand has become the *adagio* as the desired form of tool use, in contrast to more cognitivist approaches to understanding people's behavior with products and systems.

It has been pointed out that the theoretical basis of embodied interaction helps to reflect on how people behave with products and systems. Furthermore, as the distinction between ready-to-hand and present-at-hand is an experiential one, it is proving to be very difficult to directly test what mode of engagement with a system people experience. Tromp, Hekkert

and Verbeek propose a framework for designing socially responsible behavior, which regards the experience of the influence that a designed artifact has on a person's behavior.

5.1 INTERACTION FROGGER FRAMEWORK

The framework is based on two dimensions, i.e. salience (hidden to apparent) and force (inhibition to invitation) which leads to four quadrants of behavior transformation, i.e. by inviting behavior through seduction or persuasion, or by inhibiting behavior through decisiveness or coercion. Many of the examples of products that influence people's behavior that both Tromp and Verbeek present, lean on the cognitive skills of people. Even if some examples have an embodied principle, they depend on a transition from embodiment relation (ready-to-hand) to alterity relation (present-at-hand) to establish an influence on behavior. When products become interactive, transforming the 'materiality' can also seduce people to change their behavior while remaining ready-to-hand. In contrast to current persuasive technologies, such as dynamic speed changing signs, that address our cognitive skills, transformation of behavior can also be achieved through an embodiment relation with the product or system by only addressing the perceptual-motor and emotional skills. Design that respects all human skills, including perceptual-motor, emotional as well as cognitive skills.



Interaction Frogger Framework, showing all theoretically potential mappings between action and the elements of perception (feedforward and feedback)

Not everyone will find the same things beautiful. And a particular thing will give the same person an experience of beauty or not, depending on the situation. The experience of aesthetics depends on a broad range of socio-cultural factors, such as people's values, personality, situation and history. Since aesthetics has practical consequences, such as the power to influence our behavior, it also has an ethical dimension. Designers need to consider what kind of behaviors they want to invite with their designs. Form in the dynamic sense is an inherent part of Aesthetic Interaction and differs from the traditional concept of form used in design. Form in design often relates to static aspects of products, like shape and color. Form in Pragmatist Aesthetics is dynamic and opens design up to the dynamics of product and person behavior in interaction. Designing for Aesthetic Interaction includes striving for satisfying form in the dynamics of interaction. Hummels, Djajadiningrat, and Overbeeke offer a way to involve the whole human being in design by respecting human skills. Their research identifies four main categories of human skill as relevant for interaction: cognitive, perceptual-motor, emotional and social skills. As Shusterman remarked, the experience of beauty is not limited to intellectual contemplation of beauty. This intellectual beauty is the kind one experiences when encountering an elegant mathematical proof, for example. Aesthetic experience also involves bodily skills, such as the experience of beauty that comes from mastering the technique of playing a challenging part on a musical instrument. Aesthetic experience also involves our emotional sensitivity and state. The experience of beauty can change our emotional state, but its emergence also depends on it. It also relates to our social skills. We can experience beauty in a social interaction. The commonly used sentences 'Don't be ugly' and 'That is a beautiful thing you did' testify to this social dimension of aesthetic experience.

the Interaction Frogger framework couples action to reaction for intuitive mapping in intelligent product interaction. The development towards the Interaction Frogger framework was rooted in the belief that meaning is created in the interaction. The framework was informed by the theoretical notions of Gibson's ecological perception and embodied interaction, and inspired, although not explicitly, by phenomenology and pragmatism. The reason for the

development was to go from philosophy and theory to a more practical way for designers to use these notions to explore and create intuitive and aesthetic interaction. From a practical design side it tried to make relations between the notions of feedback, visibility, mapping and affordances as put forward by Norman, combine it with the notion of feedforward as introduced to the interaction design community by Djajadiningrat, Overbeeke, and Wensveen and provided six practical aspects, i.e., time, location, direction, dynamics, modality and expression that describe the relationship between a person's action and the perception of the product's reaction. The method behind Frogger is pointing the awareness of the designer to these aspects that allow for an exploration of the available richness for creating embodied action-perception loops.

The framework consists of the following elements of perception and action.

FUNCTIONAL FEEDFORWARD: goes beyond the action possibilities and its specific purpose and instead informs the user about the more general purpose of a product and its functional features. Product designers can draw on concepts such as product semantics (sign character) and on the visibility of functional parts to inform the user about the overall functionality of the product.

INHERENT FEEDFORWARD: is related to the action possibilities of the product and the perceptual-motor skills of the person. It is the information that communicates what kind of action is possible (pushing, rotating, sliding) and how this action can be carried out (the amount of force that is possible, which parts of the body need to be involved etc.). Inherent feedforward can be viewed as a limited interpretation of the concept of affordance, i.e. where the action possibility of a control is considered, regardless of its relationship to the function of the product.

AUGMENTED FEEDFORWARD: When the user receives information from an additional source about the action possibilities, or about the purpose of the action possibilities, it appeals to cognitive skills (for example through words, pictograms or spoken words).

ACTION: The physical motor-action a person performs by using (parts of) their body.

INHERENT FEEDBACK : is the information that is returned from acting on the action possibilities and therefore appeals primarily to the perceptual-motor skills of the user. Inherent feedback originates from a concept in learning psychology called intrinsic feedback. This concept is defined as: feedback which is given as a natural consequence of the action; the feedback is intrinsic to the action. However, intrinsic applies to both things and people. To emphasize that this feedback relates to products, Wensveen, Djajadiningrat and Overbeeke propose the concept of inherent feedback for interaction design, as inherent refers to a quality that exists in something as a permanent, essential, or characteristic attribute.

AUGMENTED FEEDBACK: The term augmented feedback refers to information not coming from the action itself (which is inherent feedback), but from an additional source. Since it is not coming from the action itself, but from an additional source, augmented feedback appeals more to the cognitive skills of the user instead of appealing to the perceptual motor skills.

FUNCTIONAL FEEDBACK: should be viewed in respect to the needs, intentions and desires of the user. It is the effect in the world the user wants to achieve.

MAPPING AND COUPLING ACTION AND PERCEPTION

The above-mentioned elements of action and perception (feedback and feed forward) seem to be merely states in a state diagram. What is more important is what happens between the states and how they can be mapped to each other. Mapping can occur on six aspects. These aspects of action and perception are: (where -it- can refer to the action or a the type of feedback or feedforward): *Time*: When does -it- happen? How long does -it- take? *Location*: Where does -it- happen? (micro level, macro level) *Direction*: translation or rotation? Does -it- go from minimum maximum, up-down, left-right, towards-away, back-forth, in-out, etc.? *Modality*: Can -it- be seen, heard, touched, smelled, tasted? *Dynamics*: What is the speed, acceleration, force? *Expression*: What does -it- express? Warm-cold, flowing-bound,

old-young, open-closed? Does -it- have rhythm, tempo? Mappings can be direct and naturally coupled, where the relationship between the elements of the framework is 1:1. However mappings do not have to be direct, as they can also mediate between action and perception to be able to transform behavior. Verbeek points out that the translation of action has a structure of *invitation* and *inhibition*, the transformation of perception has a structure of *amplification* and *reduction*. In Frogger terms mappings can be designed as such that a translation of action results in an amplification or reduction of feedback (perception). Likewise, mappings can also be designed such that feedforward (perception) invites, or inhibits the user's action.

The framework points to the many options for mapping between action and perception. The idea is that if a direct mapping between action and functional information is not possible, because of technological, ergonomic, financial or aesthetic limitations, new couplings should be established in the design. Designing strongly coupled dynamics for example can overshadow a mapped (dis-coupled) location aspect, resulting in an overall sense of natural coupling. This is shown in the Sensible Alternative, a smartphone interaction concept in which the appearance of icons was coupled and mapped to a push-in action . The dynamics of visual appearance were so strongly coupled that due to the scale of location mapping, location was still experienced as coupled naturally.

5.2 PERSUASIVE TECHNOLOGY

Persuasive technology is broadly defined as technology that is designed to change attitudes or behaviors of the users through persuasion and social influence, but not through coercion. Such technologies are regularly used in sales, diplomacy, politics, religion, military training, public health, and management, and may potentially be used in any area of human-human or human-computer interaction. Most self-identified persuasive technology research focuses on interactive, computational technologies, including desktop computers, Internet services, video games, and mobile devices, but this incorporates and builds on the results, theories, and methods of experimental psychology, rhetoric, and human-computer interaction. The design of persuasive technologies can be seen as a particular case of design with intent. Persuasive technologies can be categorized by their functional roles. B.J. Fogg proposes the Functional Triad as a classification of three "basic ways that people view or respond to computing technologies": persuasive technologies can function as tools, media, or social actors – or as more than one at once.

As tools, technologies can increase people's ability to perform a target behavior by making it easier or restructuring it. For example, an installation wizard can influence task completion – including completing tasks (such as installation of additional software) not planned by users.

As media, interactive technologies can use both interactivity and narrative to create persuasive experiences that support rehearsing a behavior, empathizing, or exploring causal relationships. For example, simulations and games instantiate rules and procedures that express a point of view and can shape behavior and persuade; these use procedural rhetoric.

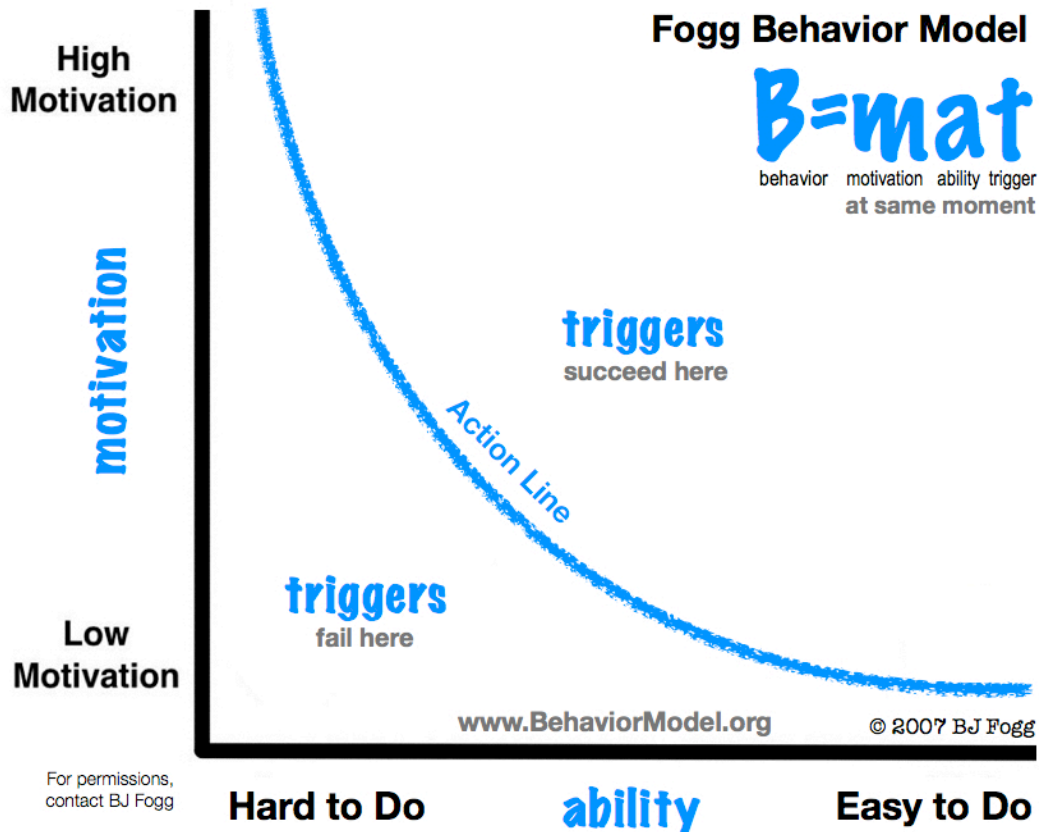
Technologies can also function as social actors. This opens the door for computers to apply social influence. Interactive technologies can cue social responses, e.g., through their use of language, assumption of established social roles, or physical presence. For example, computers can use embodied conversational agents as part of their interface. Or a helpful or disclosive computer can cause users to mindlessly reciprocate.

DIRECT INTERACTION V. MEDIATION

Persuasive technologies can also be categorized by whether they change attitude and behaviors through direct interaction or through a mediating role: do they persuade, for example, through human-computer interaction (HCI) or computer-mediated communication (CMC)? The examples already mentioned are the former, but there are many of the latter. Communication technologies can persuade or amplify the persuasion of others by transforming the social interaction, providing shared feedback on interaction, or restructuring communication processes.

FOGG'S BEHAVIOR MODEL FOR PERSUASIVE DESIGN

The Fogg's Behavior Model asserts that when people are persuaded to perform a behavior, then three factors have come together at once: motivation, ability, and trigger. As one studies successful persuasive technology systems, the FBM gives insight into the user experience. For example, how Facebook motivates new users to upload profile pictures. This feature of Facebook, like many other features, has persuaded millions of people to take action. That means millions of people have all had sufficient motivation and ability, and then Facebook has triggered these people to perform this behavior. Taken together, the three factors in the FBM become focal areas for persuasive technology. In general, persuasive design focuses on increasing motivation, increasing ability (simplicity), and triggering behavior.



ELEMENTS OF MOTIVATION

The goal in designing for motivation is, conceptually, to move a user to a higher position in the FBM landscape. In other words, the users who have high ability but low motivation need to have motivation increased so they cross the behavior activation threshold.

Motivation is a term that's used widely across various fields. a framework for motivation that has three core motivators, each with two sides.

Motivator #1: Pleasure / Pain The first core motivator in the FBM is a dimension that has two sides: pleasure and pain. What differentiates this motivator from those that follow is that the result of this motivator is immediate, or nearly so. There's little thinking or anticipating. People are responding to what's happening in the

moment. I believe pleasure/pain is a primitive response, and it functions adaptively in hunger, sex, and other activities related to self-preservation and propagation of our genes. Pleasure and pain are powerful motivators. When designers are seeking to boost levels of motivation, they can look at how pleasure and pain can be embodied. This motivator type may not be the ideal approach, especially pain, but a thorough review of motivation means at least acknowledging these options.

Motivator #2: Hope / Fear The second core motivator in the FBM is a dimension that has two sides: hope and fear. This dimension is characterized by anticipation of an outcome. Hope is the anticipation of something good happening. Fear is the anticipation of something bad, often the anticipation of loss. This dimension is at times more powerful than pleasure/pain, as is evidenced in everyday behavior. For example, in some situations, people will accept pain (a flu shot) in order to overcome fear (anticipation of getting the flu). But hope/fear is not always more motivating than pleasure/pain. The FBM does not rank the power of the core motivators. Instead, designer and researchers should consider each core motivator and apply it to their work as appropriate. Hope and fear have long been powerful motivators in persuasive technology. For example, people are motivated by hope when then joining a dating web site. They are motivated by fear when they update settings in virus software. In my view, hope is probably the most ethical and empowering motivator in the FBM.

Motivator #3: Social Acceptance / Rejection The third core motivator in the FBM is a social dimension that has two sides: social acceptance and social rejection. This dimension controls much of our social behavior, from the clothes we wear to the language we use. It's clear that people are motivated to do things that win them social acceptance. Perhaps even more dramatically, people are motivated to avoid being socially rejected. The power of social motivation is likely hardwired into us and perhaps all other creatures that historically depended on living in groups to survive. As fables and folktales show, being banished from a community was a severe punishment for humans. For other creatures, being ostracized from a pack may have meant certain death. Regardless of the origin of the social motivator, the power over us is undeniable. Today, with social technologies a

reality, the methods for motivating people through social acceptance or social rejection have blossomed. In fact, Facebook gains its power to motivate and ultimately influence users mostly because of this motivator. From posting profile pictures to writing on The Wall, people on Facebook are driven significantly by their desire to be socially accepted.

ELEMENTS OF SIMPLICITY (ABILITY)

The next major factor in the FBM is ability. Optimizing this factor can move users across the behavior activation threshold. In real-world design, increasing ability is not about teaching people to do new things or training them for improvement. People are generally resistant to teaching and training because it requires effort. This clashes with the natural wiring of human adults: We are fundamentally lazy. As a result, products that require people to learn new things routinely fail. Instead, to increase a user's ability, designers of persuasive experiences must make the behavior easier to do. In other words, persuasive design relies heavily on the power of simplicity. A common example is the 1-click shopping at Amazon. Because it's easy to buy things, people buy more. Simplicity changes behaviors. Simplicity has six parts. These six parts relate to each other like links in a chain: If any single link breaks, then the chain fails. In this case, simplicity is lost.

- Time
- Money
- Physical Effort
- Brain Cycles
- Social Deviance : Social deviance is going against the norm, breaking the rules of society. If a target behavior requires one to be socially deviant, then that behavior is no longer simple. For example, wearing pajamas to a city council meeting might require the least effort, but there's a social price one would pay, which creates complications for that behavior.
- Non-Routine : People tend to find tasks that are routine, simpler. Like buying grocery at the same shop.

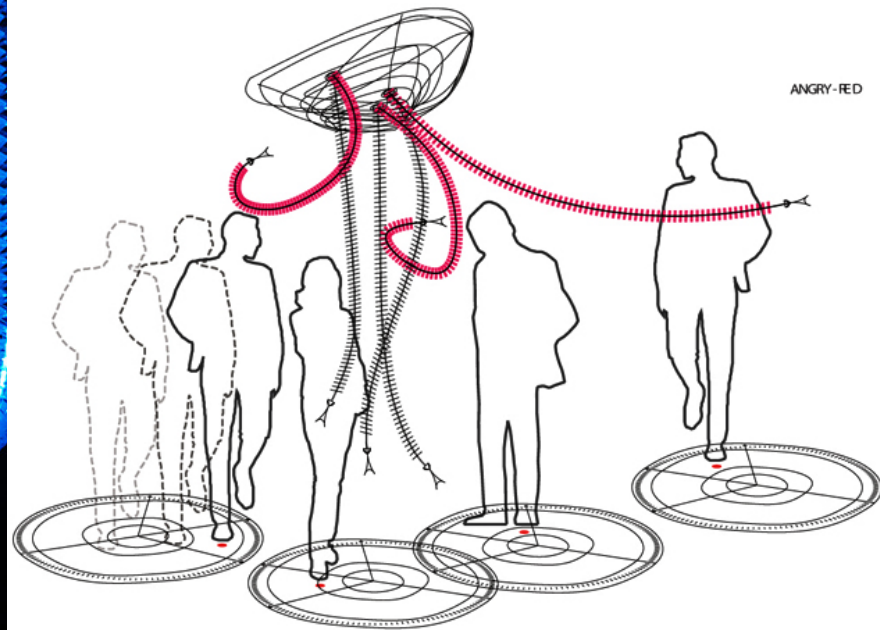
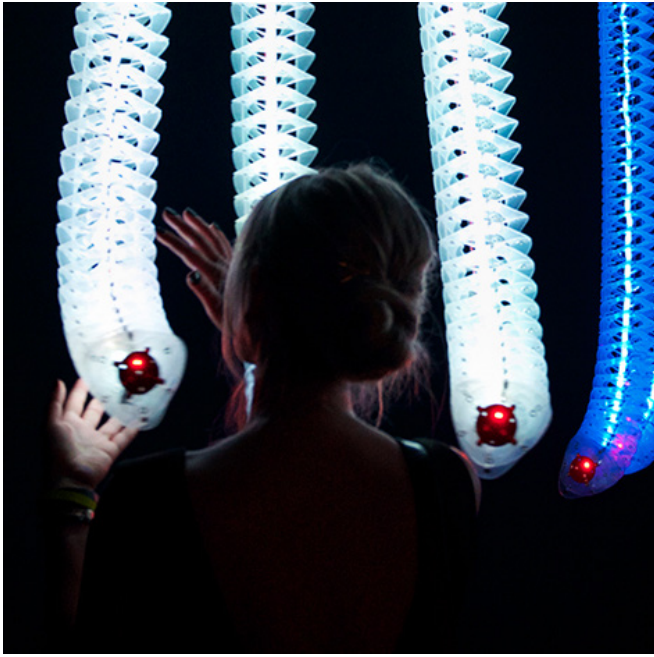
TRIGGERS

The third factor in the FBM is Triggers. A trigger is something that prompts people to perform a behaviour. Triggers are a vital aspect of designing persuasive products. In fact, for behaviors where people are already above the activation threshold – meaning they have sufficient motivation and ability – a trigger is all that's required. Different triggers function differently. The three types of triggers: sparks, facilitators, and signals. A spark is a trigger that motivates behavior. A facilitator makes behavior easier. And a signal indicates or reminds.

PRODUCT ELEMENTS INFLUENCING BEHAVIORAL CHANGE: EXAMPLES



DURR, is a watch that shows no time, yet conveys much meaning of time spent. It challenges the age-old perception of time as numbers and hands of a clock. The watch is nothing but a colored disk on a leather strap. Every five minutes the watch vibrates. The user is constantly made aware in a tangible form the amount of time passing by. The understanding of time being spent on specific activities is heightened with this innovation. Subconsciously, the user is able to segment various parts of the day, and in doing so is consciously aware of the changes one needs to make. The Durr aids in prioritizing of activities as per the desires of the user. The beauty of Durr is in its minimalistic approach of performing a function in a new way. In a world where smallest of objects are being overcrowded with functionality, Durr stands out to bring out the essence of requirement in a subtle way. We have smartphones and smart watches today to tell us time along with millions of other things, but none to make us understand it better than the Durr.



PETTING ZOO is an amusing and insightful interactive exhibition. It consists of tentacle-like flexible structures protruding from the ceiling. The structures change color and forms depending on the kind of interaction people make with them. For example, if someone ignores it, it turns red depicting anger; while being caressed, it curls up in a coy manner. This almost animal-like movement and behavior not only amuses but influences the people into interacting with compassion. This is an intelligent innovation of springing life into machines. Even if people are consciously aware of their material existence, they are lured into even feigning compassion since people are also consciously aware of the self image they are projecting. The action and feedback are humanized, and soon enough a bond is built much like human-animal interaction. It is an excellent example of how we can use technology in our built environment to evoke emotions. Today when we are interacting more with machines, ATM machines, Ticketing booths, vending machine etc; such innovations are much valuable in understanding how to transform into a humanized world with compassion being primed into us through these interactions.

6. CONCLUSION

Technology and religion have been at odds with each other through ages. The question being explored through this paper has been that can they both coexist symbiotically, while being able to provide insight to each other. Psychologists across have always tried to decode the mysteries of mass mind altering abilities of religion. I have tried to investigate into it while also realizing that in this digital age, the same is recurring. It has not been long since the dark side of digital revolution is showing face, much research is being done now on the same. As religion has been accomplishing through ages, being able to create culture and wide following, the same stands for technology, although with less clarity and focus, which rather seems to be the worrisome notion. Much like the tobacco industry who defended themselves and were on good ground till they could be directly linked to cancer; much like the Cola industry who still defend themselves claiming no direct harm, although consuming 23 sachets of sugar in a regular cup of cola is rather preposterous, but how many of us realize it and refrain. Technology is driven by multi-industries, and when the greed of these industries realize the mind altering ability, it is a much bigger fight. Persuasive technology holds the key to this portal, Can this key be used to safe guard and address the current issues birthed by technology? It is important for us to delve into the behaviors technological devices are advocating. In order to counter and use it to our benefit, for society and individual wellbeing, studying ritual practices which claim to do the same seems imperative. Rituals have proven to create pro-social behavior amongst people involved. Rituals create experiences which are well designed to have the desired effect. Rituals like meditation, using prayer beads are seen commonly across most religions, proven to help calm or sharpen the human mind. I have tried to investigate what are these common elements in rituals which aid in creating an experience, the common tools at work. Can these be inspirations for designing objects performing the similar functions in context of the digital natives? In order to successfully achieve these I have presented how interaction design can help inflict behavioral change. In the Fogg's behavioral model, we are informed of the implications of factors like motivation,

trigger and ability in designing products can have an impact in influencing people. To conclude, the findings have provided with a platform to design products which embody pro-social or self refining attributes.

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