Introduction

Although the relationship between societal paradigms and pro-environmental behaviour is not new to macromarketing research (e.g., Mittelstaedt et al. 2014; Prothero, McDonagh, and Dobscha 2010), there has been limited exploration of the conditions necessary for societal adoption of conservation behaviour (McDonagh and Prothero 2014). Consumption and marketing practices are however changing with the consumer zeitgeist shifting from individualism and materialism, towards responsibility and ecological sensibility (Varey 2010; Assadourian 2010). This shift reflects a transition from the Dominant Social Paradigm (DSP) to the New Ecological Paradigm (NEP) (Dunlap et al. 2000). Nevertheless, behavioural change tends to be insufficient to offset the damage caused by hyper-consumption. Cultivating a "less is more" NEP approach demands behavioural change that challenges the underlying value systems rooted in DSP (McDonagh and Prothero 2015). Hence, we identify how the existing DSP can be challenged to support a paradigm shift.

At macro level, marketers draw attention to dominant worldviews that shape human-nature relationships (Stern et al. 1995), giving rise to work that seeks to identify and measure behaviour. Unlike the industrial DSP conception of human-nature relationships, the NEP as an emerging belief system supports environmental values and beliefs that underpin altruistic and biospheric concerns (Dunlap et al. 2000). Environmental concern is tied to a sense of identity with nature and a worldview that encourages humans to perceive themselves as a part of nature (Schultz 2000). Thus, a move towards NEP requires fostering of a psychological relationship with nature defined by a deeper realisation of an "expanded ecological self" (Kuhn 2001). However, how this is achieved remains unclear.

The literature on how consumer identity-building is predicated on nature-related worldview is limited. For example, work exploring factors underpinning the NEP captures beliefs supporting the intrinsic value of nature but neither explores human experiences of being in nature nor the resulting meanings that define the emotions and views of their relationship with nature (Nisbet et al. 2008). Thus, there is a lack of holistic understanding of how key external factors and psychological influences assist in forming environmental values, beliefs, and attitudes about nature that lead to particular worldviews. Moreover, an altruistic worldview requires a wider identification to nature beyond humankind (Kuhn 2001). With a few exceptions (e.g., Dobscha and Ozanne 2001; Kuhn 2001), the literature lacks explanations on the consumer transformation process as they construct an ecological identity. Thus, we theorise the process of ecological identity building, developing the field by offering in-depth insights into the motivations and stages of ecological identities and worldviews. We answer the questions: Why and how do people form connections with nature? How does the process of developing a sense of attachment to nature evolve?

An ethnographic study of 15 consumers in regular contact with nature allowed us to immerse deeply via participant observations and depth interviews. The aim is to uncover symbolic meanings shaped through experiences, and to identify the inner motivations and psychological processes forming perceptions of and associations with nature. Naturalistic inquiry and a grounded approach addressed the problem of recall in previous studies using self-reported measures (Schultz 2002; Kals, Schumacher, and Montada 1999). Our approach resulted in three contributions to marketing literature. First, our findings explain how the interaction between broader environmental factors and consumer value and belief systems influence perceptions of nature, establishing a pro-environmental orientation and an ecological identity. Second, our research is situated within an

Asian context, Malaysia, responding to calls for studies into developing societies with large, growing consumer middle classes (Eckhardt and Dholakia 2013). Finally, we offer suggestions to policy makers on macro-social marketing programs to encourage environmental concern and pro-environmental behaviour.

The paper proceeds with a review of the literature on worldviews, identifying fundamental values and beliefs, and the role of ecological identity in establishing human-nature relationships. The next section addresses the study's method, followed by interpretative findings and discussion of emergent themes. We conclude with research implications.

Ecological Worldview

A worldview is a collection of concepts, images, values, and beliefs one holds about the world based on experiential interpretation and scientific knowledge within a selected culture (Aerts et al. 1994). The NEP incorporates environmental values, generally referred to as "human values with respect to the natural environment," central to environmental concern (Reser and Bentrupperbaumer 2005, p. 141). Specifically, environmental values represent personal and societal beliefs about nature's significance and how humans should treat it. These include self-expressive values such as biocentrism (valuing living things), altruism (valuing other people), and egocentrism (valuing oneself) (Schultz 2000). Self-transcendence values (valuing others and nature), as opposed to self-enhancement values (valuing oneself above others), support a pro-environmental worldview (Schultz, 2001). Shared societal values (e.g., moral and religious values) valuing nature as sacred and enhancing human wellbeing are also linked to environmental concern (El Jurdi, Batat, and Jafari 2017). Beliefs can be general (as measured by the NEP) or specific (such as belief in the existence of climate change). The belief that nature has intrinsic value that

supports the wellbeing of society or humans in general shapes human perceptions of and behaviour towards nature. Human belief in the existence of environmental problems increases environmental concern and the likelihood of engaging in environmentally friendly behaviour (Kilbourne and Pickett 2008).

While establishing the importance of nature experiences in developing associations with nature, previous studies have focused on the impact of nature-centric experiences on the self, neglecting explanations of how such experiences reflect human perceptions about nature (Freeman et al. 2012; Arnould and Price 1993). Moreover, literature on worldviews predominantly focuses on establishing a link between worldviews and environmental behaviour (Van Petegem and An Blieck 2006). Consequently, how conservation behaviour develops is underexplored. The complex reality governing human-nature relationship and the use of self-reported measures in previous studies limit the ability to explain the formation of ecological worldviews (Schultz 2002). Previous studies have lacked a coherent approach to capturing the interaction between social factors and resulting psychological processes. Thus, major questions have gone unanswered relating to motivations for and the process of forming connections and attachment to nature, and the role of sensory experiences in creating meanings that assist in incorporating nature within oneself. This study aims to address this lack of in-depth knowledge on ecological identity and formation of worldviews.

The Notion of Ecological Identity and Formation

While a worldview represents the way one sees the world, identity reflects "ways of being in the world" (Walton and Jones 2018, p. 666). Identity theories focus on the behaviour of multifaceted individuals within a social structure (Stets and Biga 2003). Social identity theory regards 'self' as a construct co-created through interaction with society, individuals and culture. Social constructionists propose identity is constructed from social interaction, however it limits the social aspect by omitting the physical environment (Polonsky, Kilbourne, and Vocino 2014; Bragg 1996). In comparison, personal identity theory focuses on personal inputs that guide identity (Stets and Burke 2000). Personal identity theory uses symbolic interactionism, employing the mind and imagination to form meanings internalised to sustain one's self-identity (Charmaz and Mitchell 2001). Thus, personal identity formation involves "permanent questioning and re-inventing of self" (Moisander and Pesonen 2002, p. 330). Human behaviour is understood within the context of individual experiences and expressed through language and signals. Hence, identity formation involves the interaction of inner and outer dynamics. While social identity is activated through the cognitive process of depersonalisation (seeing the self as part of a group), personal identity is activated through self-verification (seeing the self in terms of meanings and norms associated with a role) (Stets and Burke 2000). In summary, a sense of identity is an outcome of the interaction with social and physical environment, roles, language, and self-reflection.

Identity results from a complex process and attempts to understand the phenomenon uses predominantly social or psychological perspectives (Schultz et al. 2004; Kuhn 2001). In contrast, a social-psychological perspective incorporates the psychological processes of individuals within a wider social context (Bragg 1996). A social-psychological approach assumes ecological identity is co-constructed by interaction of social and psychological selves. Additionally, recent studies

based on a social-psychological orientation incorporate the physical environment to view the self as part of the ecological system (e.g., Duffy and Verges 2010; Chawla 2007). Chawla (2007) found positive experiences of nature during childhood shapes emotional affinity and concerns for nature. Such orientation assumes that "the self both shapes this ecological system and is a reflection of it" (Bragg 1996, p. 99). Ecological identity then reflects the ways in which individuals perceive the self as part of a mutually beneficial relationship with nature, make sense of themselves and their world and what motivates their actions.

Scholars emphasise the behavioural aspects of how consumers form, express or sustain their identity. Aspects of socialisation, such as childhood exposure (Chawla 2007), direct nature encounters (Freeman et al. 2012) and association with interest groups (Fielding et al. 2008) influence identity formation. Additionally, consumers may express and sustain their ecological identity by engaging in green behaviour (Perera 2014; Dobscha and Ozanne 2001). These articles highlight the potential influence of ecological identity on nature-related behaviour, however with limited exploration of psychological mechanisms and associated meanings defining identity development. An additional approach applies the idea of symbolic consumption of objects and the resulting meanings to identity formation (Kates 2002). Such an approach is based on the notion of extended-self suggesting objects can be used to reflect a person's identity (Belk 1988). For example, subcultures of gay identity are expressed through piercings and doing drag (Kates 2002). Within the domain of environmental behaviour, similar approaches are used to suggest that nature consumption helps form a nature relationship that extends one's identity (Hinds and Sparks 2008; Freeman et al. 2012). For example, Freeman et al. (2012) found participants' gardening experiences led to a sense of attachment with nature.

What is lacking in the literature is the key issues surrounding the stages and processes individuals experience as they form and sustain their ecological identity. Schultz (2002) suggests nature identity development requires the interaction of three inclusion aspects with nature, namely connectedness, care and commitment. Connectedness with nature explains the extent to which humans include nature within cognitive representations of the self. An overlap between cognitive representations of nature and of the self results in shared qualities and a commitment to protect nature. Extant literature on nature identity development emphasises the cognitive, behavioural and affective aspects, leaving unquestioned the experiential aspects shaping consumers thoughts or emotions. Attempts to explain these development stages fall short in identifying implicit meanings that drive motivations to associate with nature (Saraiva, Fernandes, and Von Schwedler 2020; Perera 2014). Hence, it is intriguing to explore the consumer transformation process, as they construct an ecological identity by uncovering symbolic meanings and psychological perceptions shaped through experiences to establish a sense of personal connection with nature. Research is required that focuses on how the phenomena emerges and evolves through activities, incorporating thoughts, emotions, and symbolic meanings within the lived experience. Moreover, the current knowledge on connectedness with nature is based largely on empirical studies using self-reported recollected thoughts and beliefs, rather than actual encounters with nature (Schultz 2002; Kals et al. 1999). Recollected beliefs about nature may be ineffectual, as an individual's relationship with nature is complex and mostly experienced in real-time.

In summary, nature identity formation is complex and needs comprehensive exploration from a grounded perspective. We use a social-psychological approach to understand how consumers form ecological identities. We apply a process-oriented perspective to theorise the emergence of ecological identity and worldviews (Cloutier and Langley 2020). In addition to

social influence, this study acknowledges the significance of actual nature experiences on the formation of ecological identity. We uncover how external influences are internalised to form inner motivations through the process of socialisation, i.e., the interactions people have with their immediate surroundings to acquire the "skills, behavioural patterns, values and motivation" needed to function competently in society (Grusec and Hastings 2006, p. 13). Next, we describe our approach in addressing these shortcomings.

Method

This research takes a symbolic interactionist approach, recognising that humans process abstract thoughts, apply reflexivity and assign meanings, forming symbolic language and signals of communication (Blumer 1998). We focus on the meanings interpreted from participants' perspectives, answering the question 'what is happening?'. An inductive, emergent design facilitates a grounded understanding from the data collected.

The fieldwork was conducted in the environs of Greater Kuala Lumpur, Malaysia. As the hub of Malaysia's environmental movement, it provided access to nature-related events and nature lovers. Data were captured in over 340 pages of field notes and interview transcripts, 160 photographs (standalone data sources) and 21 pages of visual representations. Participants were selected based on the following criteria: (1) actively engaged with nature through participation in nature-related activities and/or through an environmental society; (2) engaged in nature conservation activities; and (3) above 18 years of age. Participants ranged from those who enjoyed leisurely nature walks, to bird watchers and hikers, to those involved in riskier wilderness activities such as river and mountain trekking. The assumption that people who actively seek nature experiences demonstrate an established level of connectedness with nature guided our choice of

participants (Cheng and Monroe 2012). Besides, observations were conducted at the homes of participants who volunteered to inform about their conservation practices. This activity authenticated our selection, as participants displayed conservation behaviour such as composting, recycling, second hand buying, water or energy saving and reusing. The insights show an aspect of commitment to nature that emanates from a sense of connectedness and care that support environmentally friendly behaviour. Learning from socialisation and experiences of people who display attachment to nature identifies gaps in mainstream consumers' ability to associate with nature. These learnings can offer direction to policy makers and social marketers to persuade environmental and consumption responsibility.

Participant Observation

Research began with observations of people's actions in nature, to understand actual behaviour in a naturalistic setting. This involved approximately 90 hours of observations over 11 nature observation activities (Table 1). Individuals and groups were observed while participating in a range of nature-related activities enabling evocation of deep feelings and thoughts less accessible in artificial settings. This method provided access to complex behavioural details of nature relationship via verbal and non-verbal communication, emotional expression, physical activities, time spent on activities, and engagement level. In the pre-planning stage, we identified nature-related events and built rapport with organisers and participants. Unstructured observations and informal conversations were held to learn more about participants' interests and engagement frequency. Interactions with participants during activities aided in building the rapport necessary to gain participants' consent for interviews. Additionally, observation data guided development of interview questions.

Interviews

The observations were supplemented with 15 in-depth interviews of 60-120 minutes each (over 20 hours). Participants were approached post observation, through word of mouth, or via snowballing for interview participation. The small sample informants focused on depth of understanding rather than large sample size (Belk, Sherry, and Wallendorf 1988) (Table 2). The sample spanned genders, ethnicities and religions, with an average age of 40 years and possession of tertiary education. The interviews were conducted in English, chronologically trace participants' experiences with nature from childhood. Interviews recorded were transcribed verbatim.

Projective Technique

When consumers experience nature through multiple senses, reality is encoded into abstract symbols, words and images. Consumers may retrieve and process these meanings both consciously or unconsciously (Koll et al. 2010). Participants' thoughts and emotions were probed further during interview sessions through associative and projective construction techniques. Thus, allowing participants to elaborate on implicit meanings and inner thoughts, and for in-depth probing to evoke the expression of naturally occurring thoughts and embodied memories (Doherty and Nelson 2010: Belk, Ger, and Askegaard 2003). Free association and collage construction techniques were used. Instructions given to participants included: (1) pen down any number of words or images when you think of nature; and (2) using the magazines provided, select and cut images to create a collage expressing your thoughts on nature. All interview participants were requested to complete both tasks during the interview phase and provide narrations. Participants completed their drawing followed by the collage construction activity.

The free association technique taps non-verbal reactions, including images (Koll et al. 2010). Participants were asked to spontaneously write words or draw images that came to mind when thinking about nature. The collages supplemented the narrations of the drawings by allowing participants to express unconscious desires, thoughts and metaphors in relation to nature (Koll et al. 2010). The participants were given the freedom to select any images from a pile of magazines that captured their thoughts associated with nature. The projective techniques were helpful to (1) retrieve conscious views and images of nature from associative memory; (2) identify objects perceived as nature and non-nature; and (3) understand perceptions of nature. The analysis compared data across the different techniques and across participants to generate themes describing their views of nature (Figure 1). The insights supported the various views of nature that defined self-nature relationships.

Data analysis

Data was analysed using NVivo11. Open (line by line) coding was applied, followed by focused coding to identify significant categories and lastly theoretical coding to establish relationships between the categories (Charmaz 2006). The initial stage of coding involved reading and re-reading data to develop familiarisation and highlight items of potential interest. In this step, we identified surface meanings related to views and association with nature. Next, through systematic coding, each data set was independently coded. This enabled selecting and sorting data within-case coding for each data set. The data extracts were then collated for each code. Next, the codes within-case were compared across multiple data sets of observations, interviews and projective techniques to identify overlaps between codes. Through between case analysis sub-themes and themes were developed to establish relationships between themes and to inform the

process of ecological identity and worldview development. The findings presented in this study are the outcome of an iterative process of data collection and analysis. Data were inductively collected, with constant comparative analysis applied to develop themes.

The next section presents findings, followed by a discussion of ecological identity development.

Findings

Findings are presented in four sections: 1) general sense making about nature; 2) *socialisation sources* as triggers of ecological identity formation; 3) *socialisation processes* capturing thoughts, emotions, and meaning making; and 4) *socialisation outcomes,* including attachment to nature, and ecological worldviews.

Making Sense of Nature

In this section we present participants images, thoughts, and feelings in response to the use of projective techniques. As this study addresses consumers' motivations to associate with nature, this exercise teased out vocabulary and imagery of nature as pictured in participants' minds. The responses provided insights on 1) elements regarded as nature and non-nature; 2) beliefs about connection to or separation from the natural environment; and 3) motivation(s) to identify with nature. Most importantly, the insights confirmed an established human-nature relationship among participants, defined by a sense of connectedness.

In general, participants associated nature with trees, rivers, and mountains, expressing a common view that these elements provided the sole reason for the existence of life. All participants drew trees and plants, which signified symbols of life and key measures of health for nature:
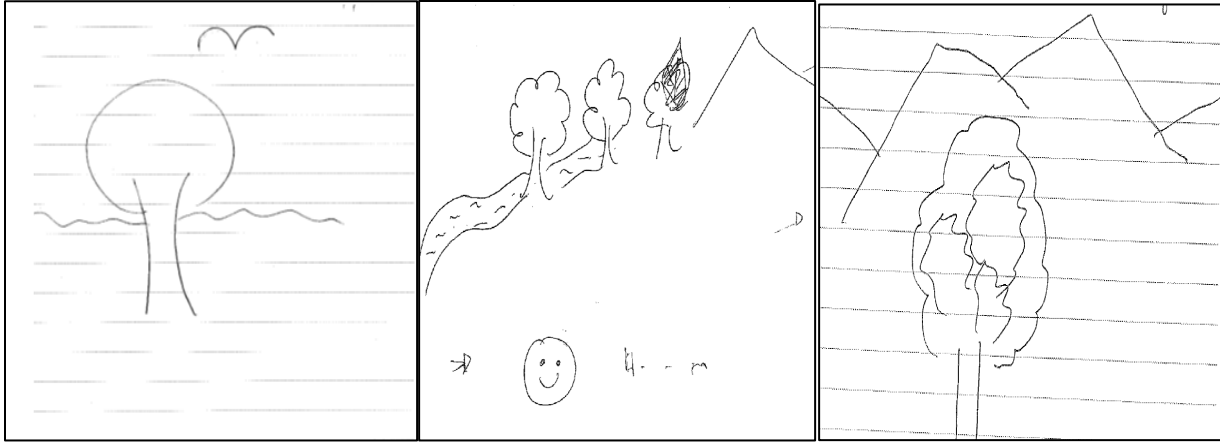
(Hashim, Chairman of NGO)   *(Vithya, Civil Servant)*   *(Nathan, Botanist)*

Participants actively excluded animals and humans in their drawings, but concurrently expressed desire to be part of nature. Self-awareness of belonging to the same human species that destroys nature resulted in guilt. Although the consensus was to exclude human interference from nature, most participants regarded humans as a part of nature. Mei drew 'herself' and Sriram his 'home' in nature. The use of the words 'myself' and 'home' to represent nature communicates a sense of belonging.
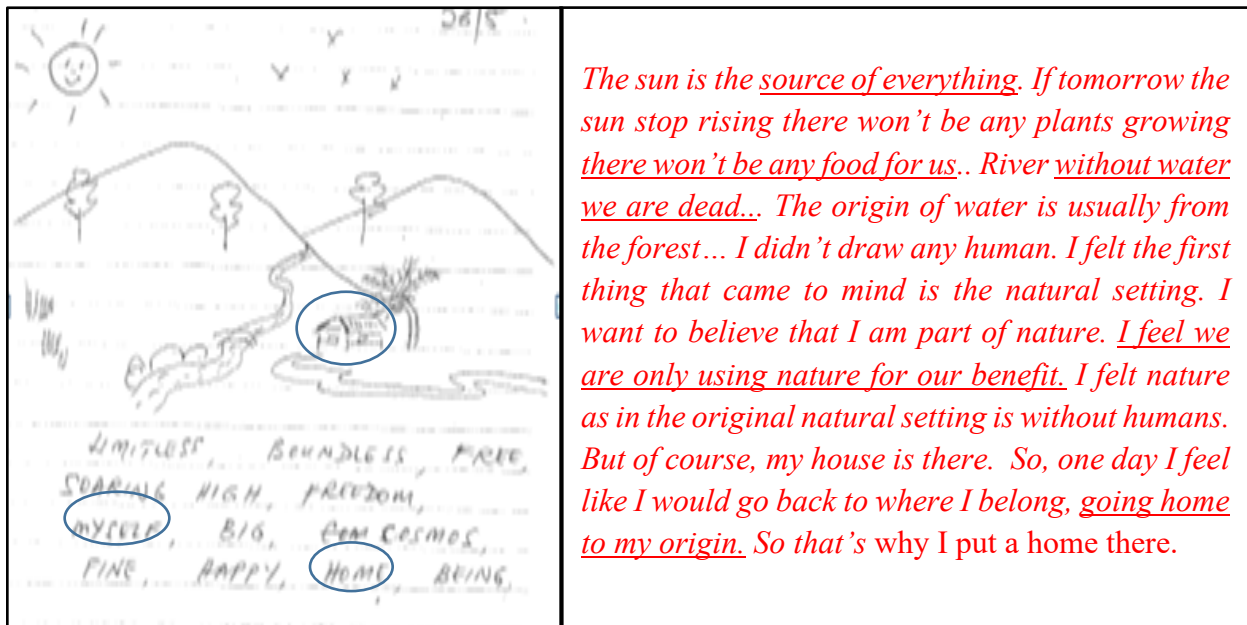
The sun is the source of everything. If tomorrow the sun stop rising there won't be any plants growing there won't be any food for us.. River without water we are dead... The origin of water is usually from the forest... I didn't draw any human. I felt the first thing that came to mind is the natural setting. I want to believe that I am part of nature. I feel we are only using nature for our benefit. I felt nature as in the original natural setting is without humans. But of course, my house is there. So, one day I feel like I would go back to where I belong, going home to my origin. So that's why I put a home there.

(Sriram, Environment Auditor)

Sriram had a strong perception of oneness with the natural world, reflected in his comments associating a mother's womb from which he originates to nature.

> *We were swimming in our mother's womb ... born in water. We were sustained in water then only I realised we came out of it, breathing, choking, fighting, screaming and then now you need to go back where you start ... back to the origin.*
>
> *(Sriram, Environment Auditor)*

Participants felt humans were antithetical to 'healthy' nature, and were fond of 'natural' nature, which they regarded as original and sacred. They regarded man-made objects as 'unnatural'. Priya labelled the forest in her drawing as 'undisturbed forest', Mei as 'everything except a building', and Terry with words such as 'wild', 'fresh' and 'free', suggesting disapproval of human interference.

> *Untouched forest the trees are still there, and trees they become the home of so many things. I would hate to see people cutting down trees. Planting tress yes encouraged. You don't have to cut trees to build condo, I don't know I would fight with them anytime.*

(Priya, Lecturer)
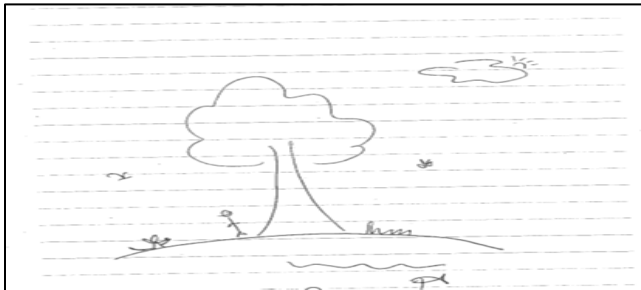
> *Everything except a building.*

(Mei, Botanist)
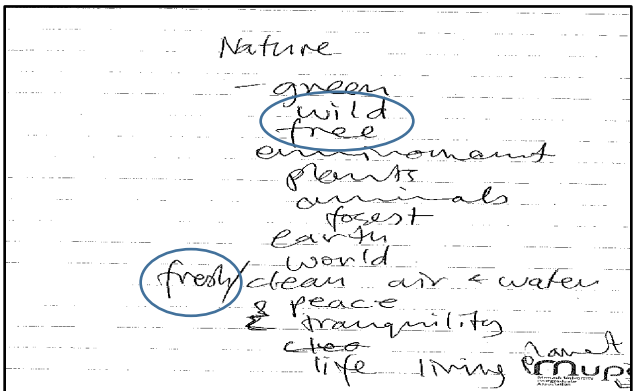
> *Fresh means un-spoilt, young new, continuously being rejuvenated. The artificial world is what is created by human. One thing that we cannot create is life, so everything we create is kind of dead, like the table is dead.. The way the nature is, most naturally in the wild not locked up. Naturally free.*

(Terry, Environmental Consultant)

Referring to humans as 'they', Priya indicated an intention to disassociate from her human-identity to identify with non-human beings. These expressions resembled a mixture of guilt and aspirations for a healthy nature.

> *We are part of nature, but we need to learn how to be part of nature without destroying it, without changing it. When I see wild elephants leaving trails behind ... I always question,*

why is this poor animal coming around? It has lost its place in the forest, there is no more land it used to roam around, there is no food there..there are a lot of very angry animals out there because 'they' [humans] have been cutting and cutting and cutting.

(Priya, Lecturer)

The drawings and associated words support a strong top-of-mind association with serenity and beauty and rejection of violence and destruction. Supporting this, word associations of 'fresh clean air', 'tranquillity' and 'peace' reveal general views of nature as friendly and enhancing human existence. Thoughts of nature were associated with positive feelings of 'freedom', 'happy', 'boundless' and 'soaring high', as nature is consumed to enhance fitness or mental relaxation. While negative perceptions can be attributed to natural catastrophes, the dark side of nature is acknowledged as a way of reprimanding humans. Such acknowledgement conveys attempts to minimise guilt.

If you indiscriminately take from nature ... nature is going to indiscriminately hit back at you if she has to ... like mother and a child. The child can do a lot of things and the mother would just warn you once in a while .... Maybe it's just reminders, like behave.

(Kala, Homemaker)

Collage images such as a 'bowl of food', 'bottle of medicine' and 'ice cubes within a glass' suggest a sense of dependency. The awareness that nature is a human necessity and life source generates a degree of ownership resulting from their emotional bonding. This sense of dependency motivates them to perceive the earth as precious and thus requiring protection.

There is a <u>bottle of medicine</u> here. <u>Nature is a natural way to heal all kinds of sickness</u>... a bowl of <u>food</u>, nature give us the food we need...ice within a glass, the <u>cooling-ness</u> of inside nature.

(Hashim, Chairman of an NGO)
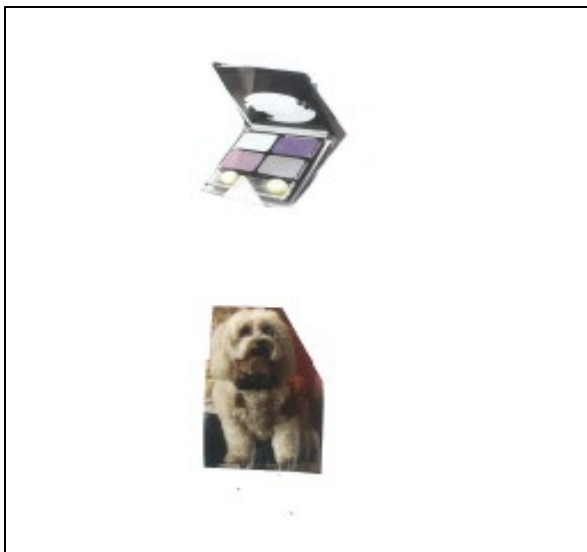
The eyeshadow reminds me of relationship with nature because as we use different attire and different time of the day, <u>nature similarly has many uses and functions depending on how I feel and what I look for nature.</u> Example the hills I go for hiking helps to <u>keep fit</u>; at the same time, it helps me to <u>relax</u> ... Nature to me is like a pet. You have to care for it and nurture it to keep the pet in good shape. The dog is dependent on you. Similarly, <u>we have to care for the nature as it we are dependent on nature and nature is part of our life.</u>

(Vithya, Civil Servant)

The collages helped express participants' broader view of self in relation to nature. The self was understood as interconnected in the web of life, eliminating the belief that humans are superior and dominant over nature. Their thoughts reveal an awareness of their positions as occupants of a shared space, resulting in a sense of interconnectedness.

In a way that they want the water and yet the water is already inside them. It kind of symbolizes the natural world and how it is part of us, it's connected with us and is flowing through us…And inseparable from them..

(Terry, Environmental Consultant)

It is an egg and this is more like a grown tree (candle). This is start of life. It's where life begins, something hatches, start of life, process. When it reproduces it is going to produce seeds, fruits seeds which eventually becomes a start of life again.

(Sidarth, Botanist)

In summary, the insights reveal a sense of inclusion with nature emphasising personal meanings, emotions, and dependency defined by gratitude and guilt. The shared meanings suggest a connectedness with nature beyond its physicality, informing an established relationship.

Capturing the Process and Formation of Nature Identity

In this section, we illustrate that individuals' motivations to develop nature identity and worldviews are built over time. Figure 2 illustrates the theorisation of the formation of ecological identity and worldviews.

Socialisation Sources

The seed of ecological identity is sown during childhood, through regular nature experiences either

alone or collectively. Both everyday activities (e.g., gardening, walks in the park) and traumatic events (e.g., physical and mental health issues) can activate associations with nature. Other than parents, the primary sources that shape one's views of nature include childhood exposure, learning via direct experiences, and regular contact.

Bonding with nature begins by communing with it regularly from an early age, especially for those with easy access to nature from their homes. Sharing by most of the participants began with their encounters with immediate elements of nature, including pets, gardens, rivers, mountains and trees surrounding their home. The findings highlight the importance of learning about nature through primary (direct) experiences rather than secondary sources such as books or the media, although the latter does trigger a desire to experience nature or learn more about it. Sidarth's emotional bond with nature began with a tree in his childhood garden. His perception of the tree as a living, but silent, non-judgemental entity encouraged the development of a shared self with nature.

> *[Who is the tree to you?] Somebody close to me ... like siblings. You cannot communicate with them, but you have a sense of belonging, you see them every day. They cut the tree eventually. I was against it, but I couldn't voice out ... That was the saddest time of my life ... I actually went [to]hug the tree [saying] don't cut.... don't cut.   (Sidarth, Botanist)*

Childhood exposure to nature is necessary to initiate curiosity and knowledge, and to provide a foundation for the development of an ecological identity in adolescence. Rezza's childhood memories of rescuing birds activated his interest in bird watching, and he currently heads bird preservation in a nature society.

> *When I was 10 years old, I rescued birds- three fledglings were lost, the mother was not feeding them ... I rescued them from the tree, fed them banana until they were reasonably*

big for a couple of months, and then I let them … they flew off. So, from there I had an interest in birds and all that I always had a fascination with birds.

(Rezza, Environmental Activist)

Additionally, the excitement of exploring wild nature unaccompanied by adults encouraged a curiosity to explore, facilitated self-learning and initiated an early relationship with nature.

When I was a young boy … one of my elder brothers took us to the waterfalls…I remember the middle of the pond, there was a dead small branch sticking out … there was a kingfisher sitting there … that was beautiful. I was just mesmerised. *(Sidarth, Botanist)*

Environmental values are inculcated through regular contact with nature as children, where participants spend time with their parents during nature activities (i.e., gardening, nature trips, camping, etc.). Bonding through sharing, playing, and enjoying each other's company created nostalgic memories and motivated participants to adopt values and teachings instilled by their parents. These memorable experiences provide lasting impressions that, upon reflection through adolescence and adulthood, form core ecological values and beliefs.

What influenced me is my parents, [they] took us out [me and] my brothers to quite a lot of trips like [to] Frasers [Hill], to sea sides, nature type location and then they also took me to the zoo, got us interested in wildlife, we had some pets like tortoise, so we were encouraged to be aware of nature … I joined the Malaysian Nature Society when I was in school, again my parents were supportive. *(Terry, Environmental Consultant)*

Values and beliefs formed during childhood play a fundamental role in establishing behaviour in later life. Encounters with nature are essential for curiosity and to activate attachments to elements of nature that then help create personal meanings.

Socialisation Processes and Learning

We found that cognitive processes strengthen environmental identity through sensory exposure, knowledge-seeking behaviour, and formation of meanings through reflection on experiences.

Sensory Use

First-hand exposure to nature activates multi-sensory experiences that connect the self to reality. Our five senses provide data that are interpreted to form meanings, later reproduced as nostalgic feelings and memories. Through the senses of smell, sound, and sight, participants became psychologically connected to experiences. This fostered an emotional connection beyond physical characteristics of the object connecting the self and nature. Sharp senses are the outcome of prolonged nature experiences and the accumulation of similar nature experiences. For example, participants developed the ability to detect creatures or identify birds aurally. Through their senses, participants connected with elements of nature and internalised their experiences. When similar senses were activated in subsequent nature experiences, memories of the previous experiences were evoked, strengthening emotional connections.

> *My mother plants all kinds of vegetables. I will be interested in every single vegetable she is planting ... after she goes, I would do something [gesturing with hand how he plays with the soil] ... Now it excites me when I play with soil ... It gives me a feeling that I am close to home.* (Sidarth, Botanist)

Experiences sharpened participants' sensory abilities, enhancing their survival and adaptation skills. Such skills minimise discomfort or fear while exploring nature and nurture a sense of belonging.

> *I have done many hikes. Once you know the terrain, that usually follows a path right, even if there is a snake, you just stop. It's not gonna come around and bite you. So, I have*

become more alert to things around and to see beauty around. I know how to take care of

myself in nature, I am not going to drop down a slope and die. (Priya, Lecturer)

Knowledge-seeking Behaviour

As people engage with nature, new situations motivate exploratory behaviour (Litman, Collins, and Spielberger 2005). Learning and knowing become part of engaging with nature.

I loved walking into the forest. But my mother won't allow me. But she could only restrict me so much .... When I was 13 years I started what they call discovering the surrounding ... when we have free time, we are in the forest ... I can't remember how many times I went ... probably 50, 100 times ..., you go sneak out you see. (Sidarth, Botanist)

Acquiring hands-on skills and the ability to cope in nature comfortably prompted participants to perceive nature-related activities as intrinsically motivating, thus encouraging further knowledge-seeking behaviour.

Participants named various plants using scientific names and were able to recommend its usage. Curiosity was high when they came across species they were unfamiliar with. They looked closely at every detail including leaves' shapes and colours, smelled flowers, identified seeds, and took pictures of every interesting species of plants.

(Fieldnotes-Rimba Ilmu)

Gradually, nature is perceived as a vessel of knowledge, and seeking such knowledge provides personal satisfaction and strengthens one's nature identity. A lack of ecological knowledge is seen as a challenge to one's nature identity, and individuals modify their behaviour according to social situations to sustain it. Priya's interaction with others resulted in self-verifying her lack of avian knowledge. This challenged her nature identity, encouraging her to increase her

knowledge to restore her nature-friendly self-perception.

>*The birders decided they were going to do a birding trip … I didn't understand half of the names they were throwing out …they were all very senior people. When I started talking to them, I found that they were a mine of knowledge. If they can learn why can't I…So I went on following these guys. Every time I went, I learned something.* (Priya, Lecturer)

As knowledge and the need to affiliate with nature increase, nature is then perceived as part of oneself, resulting in a desire to care for it.

Formation of Meanings

'Meaning' refers to an "individual's interpretation of and identification with objects or events, their expectations, and the way he or she feels or is motivated to respond to them" (Yagi and Kleinberg 2011, p. 635). Individuals do not merely respond to their surroundings; they engage in inner conversations resulting in meaning-making. Participants reflected on learning from others and from their nature experiences to form images and special meanings. In addition to denotative meanings, consumers also inferred symbolic meanings beyond the instrumental use of objects (Nasar 1989). For example, participants perceived nature as 'pure', 'womb', 'teacher', 'a home', 'mother', 'sibling', or 'a sacred place', connotative meanings resulting from evoked emotions.

Guided by culturally-driven animist beliefs, participants personified nature; '*mountains could hear and speak'*, and *'the voices of the earth telling you'.* Nature has emotions, feels pain and sadness, expresses wisdom, calmness, and anger, and is dynamic. Nature also possesses human qualities such as trustworthiness, dependability, and the ability to listen. Participants symbolically perceived nature as being more than an object:

I always liked these big trees. They were comforting in a sense. You know they stood there many years, they were probably older than you and yet they are so silent, something about that. (Kala, Homemaker)

Consequently, the symbolic representation of nature as sentient aids the perception of physical, emotional, and relational similarities that inspire connections.

Moreover, animist beliefs encourage the view that nature is alive. Some participants held a strong belief in the existence of 'spirits', although most were unable to define spirits. They referred to the spirits of mountains or trees.

There was one time I had gone with two other friends [on river trekking] but they wanted to rest for a while, but I went on a little bit further. I would go on my own but somehow, sometimes you get this presence. That's why sometimes I rather stick to the path and not go off beaten because you don't know if you are intruding. (Kala, Homemaker)

Participants recalled their encounters with other beings' in nature. Priya experienced a force imitating her voice in the forest. Mei claimed she felt a disturbing presence during her stay in a forest and concluded that she had been sleeping in 'the other being's' place. During Mount Kinabalu trekking, the participants refrained from disturbing nature in fear of being cursed. Instead, they sought protection:

We stood at the foot hill entrance and said prayers, requesting for permission. The nature-guide warned us to respect the mountain, to ask for permission before nature's call and not to speak too loudly as it might disturb spirit. The guide mentioned some climbers had witnessed a white mountain goat passing, which they claim to be a spirit of nature. Stories about how a guide who took to nature's call without asking for permission jumped off a

cliff because a voice told him to do so were shared…even saying aloud the names of

animals while in nature is considered a taboo due to the belief it leads to direct encounters.

(Field note- Mount Kinabalu)

Thus, the self is perceived as one of the occupants of a shared space, signalling attempts for acceptance in and by nature. Respect towards nature is maintained by conducting rituals, such as saying a prayer, requesting permission from nature before entry, maintaining silence, avoiding cursing, and refraining from taking anything from nature. Rituals symbolically transform objects from profane to sacred (Belk, Wallendorf, and Sherry 1989). Rituals performed in nature communicate participants' attempts to sacralise the experience of nature.

When at the trails head, I will whisper in my heart I am just visiting and I mean no harm.

If I do anything wrong, please forgive me. *(Joel, Student)*

Participants perceived nature as 'pure,' 'holy,' and 'mysterious,' exemplifying its sacredness. If a person is religious, his or her religious beliefs may support the formation of symbolic meanings, such as the notion that nature is a sacred creation of God. The participants who preferred wild, 'non-artificial' nature expressed a desire for sacredness involving 'nature-virginity' – pure, original, holy and human contamination-free. Madhen linked his experiences of climbing a mountain to his belief in God.

I am a Hindu, so we believe in God. I am very humbled by their creation... it is the

association of people of major religion that God is staying somewhere up there…being on

top of the mountain gives me the feeling of that presence. *(Madhen, Surgeon)*

For some participants, nature is a sacred home containing personalised memories. Marcus (2006) suggested home is a vessel of memories and a place to be himself. During childhood, the

freedom to explore nature creates a sense of belonging, familiarisation, and comfort for some participants. Memories created during this time becomes part of the adult self.

> *I go trekking very often. I never bothered about accommodation or about the food, just go there and be prepared for anything ... the whole forest is your home.*   *(Nathan, Botanist)*

Additionally, the smell of soil was a reminder of home to Sidarth, while Sriram desired to '*go back home – to nature*', where he felt he belonged.

Personal and unique memories from nature encounters strengthen the view that nature is extraordinary. Belk et al. (1989, p. 7) argued that "through representation in an object, the sacred is concretised", and that sacred activities performed at certain places imbue those places with sacred meanings. For example, the shared experiences spent in nature with loved ones are valued as special and sacred. To preserve these experiences, participants instil a part of their ecological self in their children by exposing them to nature experiences, sharing similar experiences and knowledge.

> *A lady had brought along her teenage son for this event. During the walk, she on few occasions requested her son to take photos of plants, to which the boy was reluctant. She claims she has asked her son to come along on the trip hoping to get him interested in nature. She states that while her generation lived in nature, her son's generation finds it boring.*   *(Field note: Bukit Kiara Forest)*

Individuals concretize their nature experiences by taking photographs of nature, collecting items (e.g., abandoned birds' nests, seeds, and dried leaves), and keeping detailed notes of plants and animals observed during their nature encounters. Collections are perceived as 'expressions of self', and hence are perceived as sacred (Belk et al. 1989). These personal symbols and expressions

of nature are used to form consumers' core values and beliefs about nature, which help form and enhance ecological identities.

Socialisation Outcomes

The discussion so far has illustrated how interactions between socialisation forces and internal mental processes helped form participants' views of nature and emotional connections. This section discusses the outcomes of socialisation by detailing the formation of attachments to nature and the subsequent influence of the ecological worldview guiding conservation behaviour.

Formation of Attachments to Nature

Attachment is triggered when people connect with elements of nature, particularly those highly accessible (e.g., gardens, trees, pets, or frequently visited parks or mountains). The use of senses during connections forms personal meanings, initiate associations, and nurtures place attachment. The symbolic representation of nature as a sacred place that is alive, and origin of life communicates a deeper level of attachment. Human roles such as mother, teacher, and even sibling is assigned to nature, and encourage a focus on similarities rather than differences. Treating nature as a person helps develop a shared identity and strong emotional bond.

The findings reveal three forms of attachment to nature (emotional, religious, and spiritual) reflecting distinct levels of nature identity. Individuals form an emotional attachment when they begin to perceive a similarity to nature in terms of characteristics or goals. Examples include perceiving animals as having similar rights to survival as humans, or believing animals experience pain, like humans.

When I was a little boy, my father took me to the jungle. He used to show me how to use the 'lastik' [catapult] to kill birds. I didn't feel good. The pain that the bird was feeling I could feel it. If somebody throws a stone at me, I would feel pain.

(Sriram, Environment Auditor)

Additionally, nostalgic memories of nature activities shared with parents transfer emotional attachment.

The kids enjoyed ... they take a stick, they dig and play with the sand. Then they start pretending they are digging for treasure. It is so nice sitting and watching them.

(Kala, Homemaker)

Connecting with nature through religious teachings and beliefs activates religious attachment. Experiencing the beauty yet destructiveness of nature humbles the self, positioning it as insignificant compared to nature. Such experiences motivate participants to consider nature as divine creation.

[When asked about her experiences in nature] You feel at peace ... all your worries melt away ... it is just the wonder of it all. If anything can bring out religious feelings, how wonderful God is, who made all these things. *(Allie, Homemaker)*

Spiritual attachment is formed at a higher level of nature affiliation, as the ability to accept humans as part of a bigger web of life generates spiritual connections. Experiencing a sense of oneness encourages the view that nature resides in the self.

I would go to the beach. I feel my breathing becomes very light, shallow, not heavy breathing. Sometimes I even forget about my breathing ... sometimes when I sit there, I feel like my body, this boundary, this skin separates my body and outside becomes one.

(Sriram, Environment Auditor)

Although spirituality originates from religion, it involves inner searching and a private connection with the sacred, while religion requires following the directives of an external power commonly known as God (Sessanna et al., 2011). Spirituality promotes a higher level of affiliation where the self is assimilated with nature (nature spirituality) or the universe (cosmos spirituality). As a person's soul, body, and mind unite with nature, the individual achieves a heightened awareness of core values and beliefs directed toward the protection of nature.

Ecological Worldview

The perception that humans are an integral part of nature is a prerequisite to forming an ecological identity and a positive ecological worldview. The results identify internalised values and belief systems as intrinsic motivations that support a positive ecological worldview. The findings show differing worldviews of nature as 'the provider,' 'the creator or gift from the creator,' and 'the self,' characterised by emotional, religious, and spiritual attachment. Nature, valued as priceless, as God's gift or as self, intrinsically drives an individual's belief that nature needs to be cared for. This belief then may in turn encourage individual's ability to make a difference.

The view of nature as the 'provider' originates from a dependency on nature and the belief that nature is the origin of life. Sasi's narrative relate to a sense of dependency and connectedness.

It's a place to look in for inspiration, to look in awe, to look at things. It's a place where you get to see a lot of interesting things and you get to apply what you learn in nature to own life. You get inspiration. It's a place to feel relaxed. For me nature is a place it's like a hobby. *(Sasi, Corporate Trainer)*

Nature is symbolized as a mother responsible for humankind's survival. Nature supplies food, shelter, happiness, beauty and health, and functions as a place to improve one's characteristics. Hence, nature emerged as a necessity. Observations during nature activity indicated the motivation to connect with nature was to learn of its use to the self.

> *People were plucking leaves, flowers, smelling and tasting fruits. When introduced to a cinnamon tree, some peeled the bark to smell it. Almost all questions on trees, leaves, flowers, seeds and roots were centered on its usage to humans. A commonly asked question "is it edible".*   *(Field Notes-Bukit Kiara)*

The perception of nature as 'the provider' initiates feelings of gratitude, appreciation and compassion. As emotional attachment deepens through greater exposure to and knowledge of nature, nature is progressively perceived as a living entity connected to oneself. For example, participants personified trees as 'a friend', 'a teacher with wisdom' and 'my sibling'. Personifying nature facilitated the view of shared identity and stronger emotional bonding.

The view of nature as the 'creator' or 'gift from creator' is induced by experiencing supernatural powers or experiences supported by religious beliefs. An object may be perceived as sacred from a religious point of view or by applying personal meanings and affective attachment. Nature from the perspective of religious belief is linked to holy places, mysteries, vastness, power and myths. Experiencing sacred nature prompts nature worship (Belk and Costa 1998) and the idea of contact with the "invisible God" (Arnould, Price, and Otnes 1999, p. 43). Belk et al. (1989) suggest sacred experiences are self-transcending and motivate devotion. The beauty, power, and mysteries of nature are perceived as being beyond human understanding and generate feelings of powerlessness.

> *It always makes me feel humble to see that you are so insignificant compared to the might*

of the God… no matter how big you think you are, looking at the size and the magnitude

of the mountains just brings you down to earth. (Madhen, Surgeon)

The belief of humans as powerless against nature develops the fear of nature's fury if abused. Hence, the need to live in a safe world drives the need to protect nature.

Mountain or nature can be full of surprises but all it takes just one flip of nature and your

life is upside down… It is one of those things that you feel humbled, that you are so helpless

despite all the wealth you have.…whenever there are catastrophic things that happen there

is always a reason for these things to happen…it is check and balance. (Madhen Surgeon)

The ecological worldview, 'the self,' minimises the boundaries separating individuals from the surrounding context to promote a sense of oneness with nature. Individuals may experience sacred nature consumption by forming secular meanings. The view of nature as 'the self' is based on a higher (spiritual) attachment to nature. As individuals seek to satisfy high level needs such as self-esteem, belonging and self-actualisation, their relationship with nature evolves spiritually. The beliefs of nature as pure, sacred, and home-like alongside the interconnectedness with the web of life assist in spiritual experiences. A sense of fascination with nature inherently draws the individual to focus on the self, prompting questions about the individual's existence in the universe and in the web of life. Spiritual experiences with nature assist participants in understanding their identity, wants, feelings and thoughts. Therefore, spirituality aids the realisation of inherent characteristics, values, beliefs and capabilities individuals were unaware of.

Any place I would like to choose to meditate I would go to the beach. I feel like the waves

that are coming and going, it represents me...The waves that come in [I] feel like I am

breathing in and as it goes out breathing out. (Sriram, Environment Auditor)

A spiritual connection creates self-awareness that humans coexist with other elements of nature as part of the web of life. Participants considered a mutual existence and partnership with nature and demanded equal respect for humans and nature.

Moreover, the intensity of motivation to care for nature is influenced by the level of nature association and by ecological worldviews. A shift from an anthropocentric view (nature as an object) to an ecocentric view (nature possessing intrinsic value), and towards a greater sense of oneness, may evolve relationships with nature from being self-focused (an independent self) to representing a collective self (a socially extended self). Such an evolution would mark the transition from the perception of 'I' to 'We' (Brewer and Gardner 1996). In support, Prothero et al. (2010) categorised green consumers as individualised citizens (those who act in self-interest) and collective citizens (those who act for the benefit of wider society).

The view of nature as a provider supports a certain degree of possessiveness over it, cultivating the belief that nature ought to be conquered for one's benefit. Individuals believe nature is valuable and hence requires care, but their actions to preserve nature mainly focus on self-gain.

Nature is also a place we have to fight for to ensure it's always there for us.

(Sasi, Corporate Trainer)

This results in lower levels of altruistic or biospheric concerns. Based on this view, participants' notions of wanting to preserve nature reflect a need for self-betterment, such as to attain various health and psychological benefits for themselves. Hence, outward self-extension to involve nature is encouraged by personal goals. Vithya claimed that through nature experiences she "conquered her mental strength, felt stronger, humbled and disciplined". At the initial stage of establishing a nature relationship, an individual's self-centredness predominates the need to protect nature, minimising a sense of we-ness (Kacen 2011). Continuous exposure to nature establishes an

emotional bond with nature; participants became conscious of their actions toward nature and were motivated to conserve it because of their perceived dependence on it for survival.

> *If we don't look after [nature]…we [will] not be able to appreciate it … it will not be a part of our life anymore.* *(Vithya, Civil Servant)*

Perceptions of nature as the provider lowered participants' sense of empathy and communicated a degree of human dominance over nature. Nature identity is constructed based on an independent self and micro-motivations to promote the desire to be unique and self-focused. Thus, the emphasis is on engaging in recycling and reusing activities rather than reducing consumption; individuals attempt to abate their consumption only after satisfying their wants.

> *Sometimes when I wash vegetables … I did think of saving the other water and throwing them into the garden. But I haven't done that. Since I am vegetarian, there is actually lots of vegetable waste. But I don't do proper composting. At one point I was burying them in the garden but that was problematic and not very effective so I stopped doing … I try to recycle containers.* *(Sasi, Corporate Trainer)*

In contrast, the view of nature as a creator is defined by a minimum sense of ownership, as participants perceived nature as dominating self. This view cultivates needs to value divine creation and addresses the need to live in a safer world. Participants acknowledged their sense of dependency and co-existence with nature. Nonetheless, similar to the view of provider, their need to conserve nature was fear-driven:

> *[If nature has a voice, what do you think nature would say?] It will say look after me. If you don't look after me, you won't be having a good life. It's reciprocal.*
>
> *(Madhen, Surgeon)*

At a higher level of affiliation with nature, participant's had wider perspectives, resulting in a broader dimension of nature (such as the universe) to be perceived without dominance. Hence, the self-nature relationship is experienced without perceiving nature as a possession. Concern for others is an outcome of a broader view that all lives are strongly interrelated. Being part of nature is not solely for enjoyment but also to fulfil a need to belong and to function as an agent of social change.

> *I boycotted Shell because they were linked with several environmental issues like in Nigeria ... have been trying not to support Nestlé because they try to promote their bottled water. They even said water is not a human right, and so I have stopped buying Häagen-Dazs, I found out it is owned by Nestlé.* *(Terry, Environmental Consultant)*

Moreover, their actions were consistent irrespective of situations and challenges. Batson (1994) claims that although altruistic behaviour is motivated to benefit others, it does not involve self-sacrifice. Opposing this claim, Mei's tolerance towards insects indicates self–sacrifice.

> *I don't like mosquitos, they are pests. Living beside a secondary forest makes it worse.... That was a constant problem and that stopped a big part of enjoyment. But I try not to use anything with poison, and I have lived with mosquitos for 2 years.* *(Mei, Botanist)*

A combination of altruistic, biocentric and self-interest motives were identified as originating from the differing ecological worldviews. At the core level, however, such behaviour was centrally motivated by self-interest. Self-interest, in this case, is differentiated from egocentrism (minimum concern for others) as the intention of self-gain among participants was consideration for the well-being of *the others* and encouraging the seeking of mutual benefits.

Theorising the Process of Ecological Identity and Worldview Development

The findings support the view that identity development is a continuous process of negotiation between the self and the interacting environment (Cherrier and Murray 2007). We bring together the understanding of cognitive, emotional, and behavioural development from the section on socialisation to explain the stages of nature identity formation. Although participants' experiences varied, the emerging themes show a similar pattern of identity construction and negotiation. Our insights extend the identity theory to illustrate the process of nature identity development to include the stages of identity activation, creation and synthesis. The identity development process is discussed based on three inclusion aspects with nature (Schultz 2002) involving understanding whether one perceives 1) the self as a part of nature (connectedness); 2) the value placed on nature (care); and 3) action taken with respect to nature (commitment). Table 3 demonstrates selected quotes informing the identified themes of connectedness, care and commitment to illustrate formation of nature identity and views. We illustrate how these core components of inclusion with nature form and interact to enact nature identity.

Identity Activation: Connectedness

Identity activation requires individuals to develop the view of the self being part of nature. Schultz (2001) revealed greater concern is attached to objects within an individual's cognitive representation of self. We identified various cognitive representations through which nature is included in the self, informing the 'inclusion-of-others-in-the-self approach' (Schultz 2002; Aron et al. 1991). The process begins with a move from perceiving nature as an object to perceiving it as a living entity. Viewing nature as alive leads to its personification as a person with specific personality and human attributes. A shared self in the nature relationship is attained by focusing

on similarities as a base for establishing a common identity. The perception that nature is like oneself reduces the need to control or abuse it, instead, encouraging a need to protect it. On the contrary, viewing nature as an object generates non-self-affiliation, limits emotional attachment, and facilitates its domination (Schultz 2000). Hence, individuals develop a deep sense of self by accepting nature as a companion. This initiates an extension of self and intensifies the association with and the valuing of non-human beings.

Moreover, the formation of nature identity requires an initial perception of nature as belonging to the self. A sense of ownership of the immediate elements of nature, such as a home garden, plants, or pets is possible. Perceiving the elements of nature as belonging to oneself initiates 'psychological ownership' derived from 'knowing' an object (Belk 1988). Psychological ownership of nature is attained by having control of knowledge of it, or self-investments of time and energy in it. For some participants, nature meant a distant, uncontrollable object (such as an ocean). For others, nature was in proximate contact (such as a tree), evoking a sense of ownership. This ownership encourages attachment to an object. Direct and prolonged experiences in nature instil a sense of place and attachment resulting in the object being viewed as part of the self (Pretty, Chipuer, and Bramston 2003). The form of attachments to nature determines whether nature is perceived as part of the self or non-self. A functional attachment involves a link to nature's characteristics, encouraging individuals to view nature as important, but less important than the self. That is, nature is valued primarily for its instrumental uses rather than its symbolic attachments and is less likely to be fully integrated into one's self-identity. An emotional attachment to nature is an expression of interdependence that motivates the viewing of nature as special to the self.

Identity Creation: Care

Our research suggests that an individual's strength of involvement with, knowledge of, and affection for nature influence the intensity of their identity with nature. As involvement intensifies, individuals actively seek nature experiences and knowledge, which help strengthen their nature identity. At the beginning of the continuum of the self-nature identity, relationships with nature are focused primarily on achieving immediate psychological, health and economic benefits. Knowing generates the perception that nature has an intrinsic value, supporting the view of nature as a provider. Care towards nature is motivated by the view that nature benefits the self.

As nature involvement intensifies, individuals seek nature to satisfy higher level needs, such as self-esteem, a sense of belonging and self-actualisation. At this point, nature experiences are self-reflected at a deeper cognitive and emotional level. Kuhn (2001) states that the expansion of the ecological self encourages the achievement of a "state of wholeness" towards self-actualisation. Experiences in nature in isolation and silence create an ambience that supports emotional bonding. Participants experience self-searching and self-realisation by connecting with immediate elements such as trees (emotional attachment), experiencing nature as God's creation (religious attachment), or by admiring the universe's greatness (spiritual attachment). Thus, a journey of self-extension is initiated when individuals begin to attach emotions and value to nature (Belk, 1988). An emotional affinity to an object may motivate learning about the object, activating knowledge-seeking behaviour (Kals et al.1999). Familiarisation and knowing then nurture love, care, belonging and compassion, which drive the relationship with the object.

A stronger sense of oneness with nature may move individuals from a narrow view of the self (emotional attachment) to a wider identification of the self as part of the universe (spiritual attachment). This process defines the strength of nature identity, from a lower level of inclusion

with nature to a higher level of connectedness that satisfies self-actualisation needs (Kuhn 2001). Knowing the self then deepens an individual's meanings of existence, focus, beliefs, and values, stabilising their identity. Individuals reinforce their nature identity by emphasising self-transcendental values that encourage concern beyond the self (Schultz 2000). This is positively influenced by concern for other people (altruism) and for all living things (biospherism), in contrast to self-enhancement values that encourage egocentric concerns (Schultz 2000).

Identity Synthesis: Commitment

Commitment refers to one's willingness to invest time and resources to strengthen one's relationship (Schultz 2002). Participants attempt to strengthen and sustain an ecological identity via responsible consumption, ecological knowledge-sharing, conservation activism, and 'natural' image maintenance. Numerous studies claim the need to consume objects in order to develop, maintain, and strengthen self-identity (Kates 2002; Schouten and McAlexander 1995). Participants in this study tend to develop a unique personal image by living and consuming differently from those in the mainstream consumption culture. Their consumption practices imply a need to cultivate a desired self by changing their consumption lifestyle.

In order to sustain their nature identity, participants engage in enhancing their environmental knowledge. Environmental knowledge allows individuals to master challenges while being in nature, overcome fear of being in nature, ascertain their self-concept and build their self-esteem. The accumulation of environmental knowledge reaffirms participants as nature lovers based on their characteristics and personalities. Individuals seek such knowledge to stay liberated from social norms and mainstream consumption culture.

Identities are essentially an outcome of personal experiences and a reflection of how

individuals view the past and future. The socialisation phase identifies the role of others, specifically parents, in shaping nature association and identity. As an act of nostalgia to preserve memories, participants recreate similar experiences with their loved ones, especially their children. They impart their values and beliefs about nature to their children in hope of leaving a part of themselves in the world. As children are considered an extension of a person's self (Belk 1988), imparting personal values and beliefs to them may be considered an attempt to ensure the continuity of an individual's ecological self.

Role identities, personal attributes and possessions are commonly used in self-expression and creation (Belk and Costa 1998). Social roles, in particular, are symbols of social identity used to communicate personal information to others. Individuals establish a group identity as nature lovers by volunteering as environmental activists, holding roles in nature-related NGOs, and through conservation activities. These acts convey gratitude and reinforce their roles as a guardian of nature.

An individual's sense of self can be shaped similar to or different from the identity of others (Hull and Zacher 2007). Identity can be enacted through language, posture, gesture, dress and demeanour (Hull and Zacher 2007). For example, Kates (2002) reported that acceptance into gay communities required the need to be fashionable, while Schouten and McAlexander (1995) revealed Harley bikers' efforts to distinguish themselves using tattoos, clothing, and badges. In this study, genuine attempts by participants to maintain appearances incorporating characteristics of nature ('wild' and 'unorganised') is apparent. Participants were simply dressed, and accessory-less with minimal effort to be fashionable. Their 'nature look,' lifestyle, home environment, hunger for knowledge, calmness and friendliness reflected a manner of self-expression that identified with nature.

Implications and Conclusion

Through this research, we address the lack of explanation of underlying mechanisms leading to environmental concern (Kilbourne, Beckmann, and Thelen 2002). The insights highlight an in-depth understanding of how core constructs interact and initiate the formation of nature identity, which helps develop eco-friendly consumers with positive ecological attitudes. Applying a process-oriented perspective, we unfold the complex nature of identity formation by detailing how nature identity is activated, cultivated, and sustained.

This study provides a granular understanding of the behavioural facets required for a shift in the DSP. The importance of nature attachment in influencing consumers' attitude towards eco-friendly behaviour is emphasised. Certain forms of attachment result in a state of mental readiness or worldviews that may trigger impulsive behaviour to value or protect nature. This research goes beyond the understanding of attachment to specific places, such as cities, neighbourhoods, or recreational parks (Lewicka 2011) to address attachment to universal nature. Place-specific attachment may confine the desire to conserve nature to only places favoured by individuals (Lewicka 2011). Thus, nature attachment may explain the prevailing attitude-intention gap involving attitude as a factor influencing conservation behaviour.

This research supports a call for a more holistic understanding of cultural differences among Western and Eastern consumers within the realm of pro-environmental behaviour (Dermody et al. 2015). Polonsky et al. (2014) found the intention-behaviour gap among Asians to be less significant than that of Western consumers. They concluded that "there are mixed messages within the DSP and materialism telling them to consume more, and another, quieter voice telling them to consume less" (Polonsky et al. 2014, p. 543). While Asian consumers are increasingly aware their consumption behaviour negatively impacts nature, they face the dilemma of whether

to act on self or societal interest. Similarly, participants in this study experienced tension between conforming to materialistic values and the need to preserve the environment. However, Asian cultural values, religious teachings, beliefs such as animism and emphasis on gratitude promote the perception of nature as alive, holy, or a gift, inspiring environmentally-benign behaviour. Encouraging such perceptions is useful in addressing materialistic culture and curtailing overconsumption.

Macro marketers need to look at ways to go beyond simply encouraging eco-friendly consumption. Knowledge of various ecological worldviews may help marketers to creatively frame messages tailored to the relevant values and beliefs. Influencing those who view nature as a provider requires messages tailored to communicate the benefits one gains by preserving nature. Highlighting emotions such as love, empathy, sadness, guilt, or rage, and linking the self with nature would be appropriate strategies. Messages positioning nature as a valuable gift from God, themes connecting nature with religious beliefs, and the use of fear can promote a responsibility to protect nature. Individuals with a sense of oneness with nature work to eliminate the boundaries between themselves and nature. Nature may then be positioned as a representation of the self. Thus, future research might analyse the effects of different message framing strategies on ecological identity and green consumption.

The significance of actual nature experiences on the formation of ecological concern, highlighted in the study, has important implications for education, town planning, and residential development policy. The existing environmental education does not encourage children to develop personal relationships with nature through adequate exposure (Ministry of Education Malaysia 2013). Thus, a revamp of the school syllabus to foster practical nature experiences and develop sensory qualities to initiate and strengthen an individual's relationships with nature is necessary.

Additionally, policies must be in place to ensure city planners and property developers provide accessibility to nature and related activities. Priority should be given to developing green spaces and to providing access to parks, forest reserves, bicycle lanes and safe walking paths to encourage contact with nature.

As societies differ in terms of their ecological worldviews, reactions to policy interventions may vary based on the dominant societal outlook. Rewards or punishments may be effective tools to change behaviour in populations with low levels of nature affiliation, as consumers may comply with policies to gain reward or to avoid punishment. Conversely, a population with strong care and compassion towards nature is less dependent on external motivation. In societies with a positive ecological worldview, easy access to recycling facilities, environmentally friendly products and green spaces may be sufficient to motivate conservation behaviour.

The APAC's growing appetite, which accounts for 60% of the world's consumption, will have a profound effect on the health of the natural environment in the years to come (UNFPA 2019). Consequently, consumer preferences for goods and services, decision-making processes, and perceptions of satisfaction will be altered. This will spur marketers to evaluate their marketing strategies. The images, emotions, views, and thoughts of nature as presented in this research provide consumers with implicit meanings of nature. Decision-making consumers are the key agents of trends, and knowledge of these trends is essential in enhancing a firm's brand, reputation, and overall success.

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Figure 1: Example of Coding (Free Association and Collage Construction)

Sun/trees/river-sense of dependency

Mountains/birds in the sky/house by the river-Serenity

Home-Sense of belonging

Handwritten text in drawing:
LIMITLESS, BOUNDLESS, FREE, SOARING HIGH, FREEDOM, MYSELF, BIG, COSMOS, FINE, HAPPY, HOME, BEING,

Motivation to identify with nature

Sense of dependency

Interview narratives
The sun is the source of everything. If tomorrow the sun stop rising there would be total darkness. There won't be any plants growing there won't be any food for us. Trees also tell a lot of stories. If they can talk they will tell you a lot of stories, 10 years 50, 100 years ago, because they are there. River without water we are dead so water also is also important. The origin of water is usually from the forest…So one day I feel like I would go back to where I belong, going home to my origin. So that's why I put a home there.

Sense of dependency

Sense of belonging

Future. Thoughts

INNOCENCE TAKE CARE

Uncontaminated/sacred

Guilt/concern

Interview narratives
This big thing here is very messy… Hot of thing is happening its chaotic, messy it is not organised of the things are happening in the forest. I am thinking about my future. It tells me that I want to leave behind an earth my children can inherent. This picture of somebody caressing, taking care of mother earth..I feel water is actually purifying sometimes..when I sit there I feel like my body, this boundary, this skin separates my body and outside becomes one. There is no boundary…waves that come in feel like I am breathing in and as it goes out breathing out. It's a constant thing. So I feel I am a part of that phenomenon that is going on

my WIFE is life

LOVE LIFE

MESSY CHAOS

MY LIFE

Sense of responsibility

Sense of belonging/one with nature

Sense of oneness

(Sriram, Environmental Consultation)

Figure 2: Theorisation of The Process of Ecological Identity and Worldviews Formation
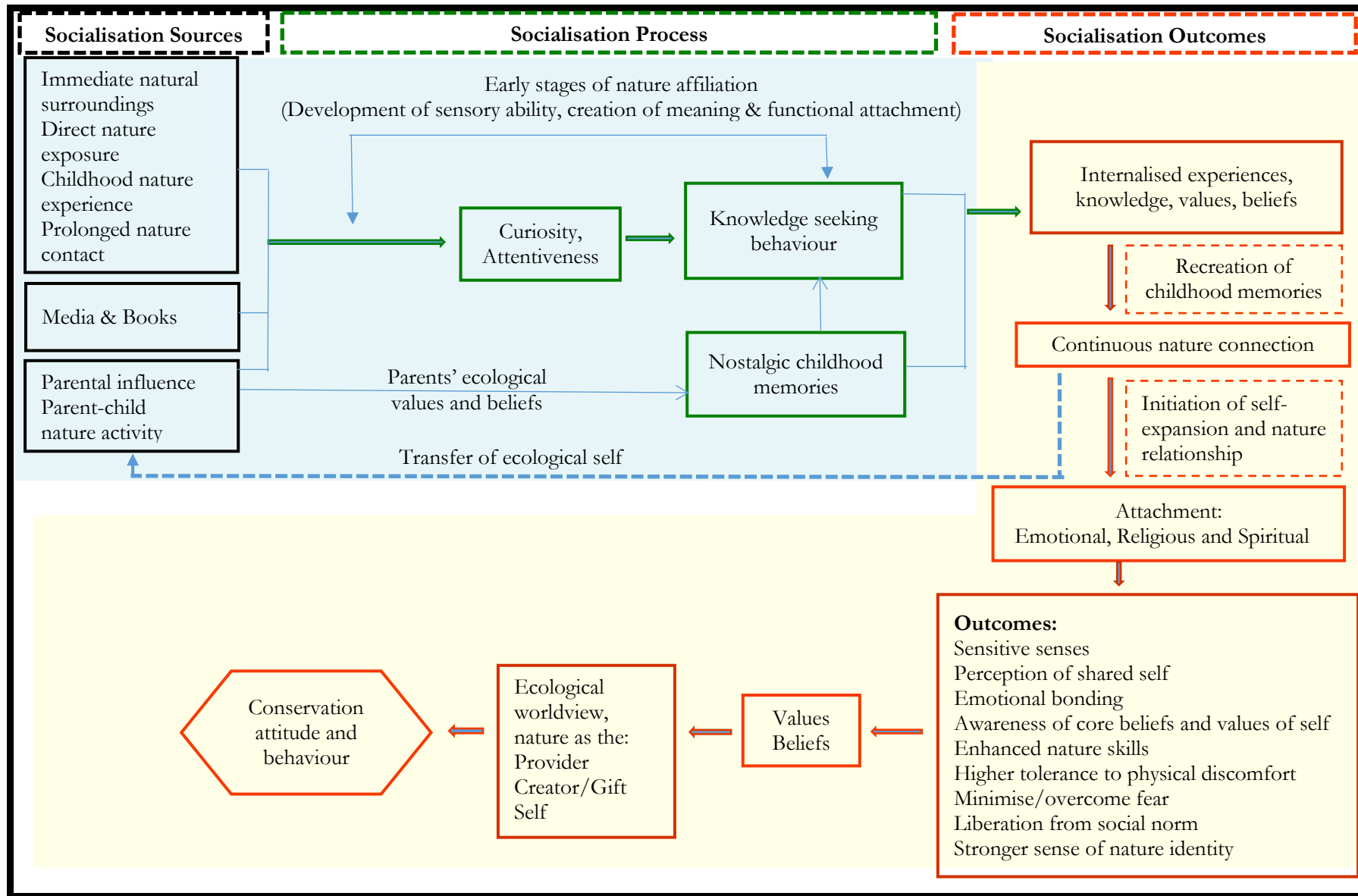
Table 1: Details of Participant Observation Activities

Nature Activity	Venue	Observation Duration
Waterfall Clean-up	Sungai Liam Waterfall, Ulu Selangor	5 hours
Nature walk (Forest reserve)	Forest Reserve Institute Malaysia, Kuala Lumpur	2 hours
Raptor watch	Tanjung Tuan, Port Dickson	20 hours (2 Days)
Botanic garden walk I (Rimba Ilmu)	Rimba Ilmu, University Malaya, Kuala Lumpur	5 hours
Bird watching (Federal hills)	Federal Hills, Kuala Lumpur	2 hours
Botanic garden walk II (Rimba Ilmu)	Rimba Ilmu, University Malaya, Kuala Lumpur	4 hours
River Keroh Trekking	Forest Reserve Institute of Malaysia, Kuala Lumpur	5 hours
Mt. Kinabalu trekking	Kota Kinabalu, Sabah	40 hours (4 days)
Nature walk (Forest reserve)	Forest Reserve Institute Malaysia, Kuala Lumpur	2 hours
Botanic garden walk (Secret garden)	Secret Garden, Petaling Jaya	2 hours
Mt.Kiara trekking	Mount Kiara, Kuala Lumpur	4 hours

Table 2: Details of Interview Participants

Names*	Henry	Kala	Sriram	Terry	Nathan	Sidarth	Rezza	Allie	Mei	Hashim	Joel	Madhen	Priya	Vithya	Sasi
Age	40	40	46	38	36	41	59	59	40	43	39	43	67	43	48
Tertiary Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation	Engineer	Homemaker	Environment Auditor	Environmental Consultant	Botanist	Lecturer/ Botanist	Environmental Activist	Homemaker	Botanist	Chairman of NGO	Student	Surgeon	Lecturer	Civil Service	Corporate Trainer
Ethnicity/ Gender	Chinese M	Indian F	Indian M	Chinese M	Indian M	Indian M	Indian M	Caucasian F	Chinese F	Chinese M	Chinese F	Indian M	Indian F	Indian F	Indian F
Religion	Buddhist	Hindu	Hindu	Christian	Hindu	Hindu	Muslim	Muslim	Buddhist	Muslim	Buddhist	Hindu	Hindu	Hindu	Hindu
Marital Status	M (Joel)	M (Sriram)	M (Kala)	M	M	M	M (Allie)	M (Rezza)	S	M	M (Henry)	M	M	M	S
No. of Children	2	2	2	1	1	Nil	2	2	Nil	2	2	2	3	3	Nil
Interview Duration	60 min	90 min	120 min	105 min	105 min	135 min	75 min	30 min	90 min	80 min	60 min	70 min	104 min	60 min	68 min
No. of Interviews	1	2	1	1	2	1	1	1	1	1	1	1	1	2	1
No. of Pages	9	27	35	30	25	34	20	7	22	19	16	17	28	16	21
Observed in Nature	N	Y	Y	Y	N	Y	Y	N	Y	Y	N	Y	Y	Y	Y
Types of Nature Activities		Nature walk	Nature walk	Bird watching		Botanic garden walk	Raptor watch		River trekking	Waterfall clean up		Mountain trekking	River trekking	Mountain trekking	Botanic garden walk and nature walk

*Pseudonyms

Marital status: S = single; M = married

Table 3: Selected Quotes Informing the Connectedness, Care and Commitment Themes

Identity Activation: Connectedness	Identity Creation: Care	Identity Synthesis: Commitment
I am glad that I have an awareness of the importance of the place and that nature is a home not only for people but also to so many others and they all have the right to be staying in their own space. (Priya, Lecturer)	We need to learn how to be part of nature without destroying it. When I see wild elephants leaving trails behind, I always question, why is this poor animal coming around? It has lost its place in the forest there is no more land it used to roam around, there is no food, there are a lot of very angry animals out there because they [humans] have been cutting and cutting. (Priya, Lecturer)	As long as there is greenery, tropical rainforest, it is beneficial to man and other creatures. So let us maintain and fight for the conservation of all of our forest. (Priya, Lecturer)
There was an eagle caught in the net. I got a chance to remove the net without hurting it…That was an amazing feeling. That feeling of letting it go again. So that it can be free again…. Gives me the sensation of I am not bounded, limitless, can go anywhere any direction up, down, right, left, front behind, flexibility. (Sriram, Environmental Auditor)	When I was a little boy, my father took me to the jungle. He used to show me how to use the 'lastik' [catapult] to kill birds. I didn't feel good. The pain that the bird was feeling I could feel it. Why you want to hit me? (Sriram, Environmental Auditor)	I don't get affected by others. I am happy with whatever I have. Even some of the shirts are 15, 20 years, I am still using, no problem. (Sriram, Environmental Auditor)
[If nature is a person, who would nature be to you?] A mother. That's the main feeling, very soothing, very at ease at home, it also can be fun. It can also be tough and challenging at times but that is physically still mainly I feel very at home. (Mei, Botanist)	They [other people] have no respect for nature. They are collectors, they see nice plants, they take it back home. But everything they take back the chances of killing it very high. …People don't understand every time you take, you think you enjoy nature but you destroying it the same time. (Mei, Botanist)	We do not understand, and we do not care so much about nature and we don't help to protect it. We always say it is the job of the authority. But we should be part of it as well. I hope one thing I have changed at this point is I know enough to talk about it, so I always try to get the message out to as many people as much. (Mei, Botanist)
It shows family and the family is kind of half a water and half normal. In a way that they want the water and yet the water is already inside them. It kind of symbolizes the natural world, and how it is part of us, it is connected with us and is flowing through us. (Terry, Environmental Consultant)	I don't like the idea people disturbing things which are beautiful, special and I hate the idea we could lose a species that go extinct. ..And there are a lot of species we have the biodiversity, beautiful pristine places are destroyed cannot really recover by themselves. (Terry, Environmental Consultant)	I boycotted Shell because they were linked with several environmental issues like in Nigeria and recently I have been trying not to support Nestle because they try to promote their bottled water. They even said water is not a human right, and so I have stopped buying Hagen Dazs, I found out it is owned by nestle. (Terry, Environmental Consultant)