An Investigation of Power of Anthropomorphism on Emotional Response, Human-Nature Relationship and Sustainable Consumer Behaviour

A Thesis Submitted To

Nirma University

In Partial Fulfilment Of The Requirements For

The Degree of

Doctor of Philosophy

In

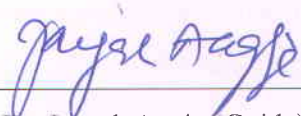Management

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(September-2023)

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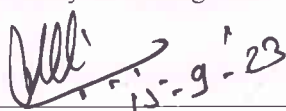
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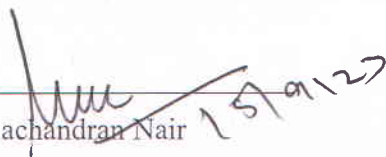
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This is to certify that the thesis entitled **An Investigation of Power of Anthropomorphism on Emotional Response, Human-Nature Relationship and Sustainable Consumer Behaviour** has been prepared by me, under the supervision and guidance of **Dr. Jayesh Aagja.** The thesis is my own original work completed after careful research and investigation. The work of the thesis is of the standard expected of a candidate for Ph.D. Programme. The final hard bound copy of the thesis is submitted after incorporating all the suggestions / corrections suggested by the referees.

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Abbreviations

Sr. No	Abbreviations Full Form	Full Form
1.	SDGs	Sustainable Development Goals
2.	SCB	Sustainable Consumer Behaviour
3.	PLC	Product Life-Cycle
4.	LN	Love of Nature
5.	TPB	Theory of Planned Behaviour
6.	ATT	Attitude towards the Behaviour
7.	SN	Subjective Norm
8.	PBC	Perceived Behavioural Control
9.	MNO	Man-Nature Orientation
10.	CN	Connectedness to Nature
11.	PAN	Propensity to Anthropomorphise Nature
12.	PI	Product Involvement
13.	BI	Behavioural Intention
14.	SA	Sustainable Apparel
15.	ELM	Elaboration Likelihood Model
16.	SU.Re	Sustainable Resolution
17.	GoI	Government of India
18.	VBN	Value-Belief-Norm
19.	INR	Indian Rupees
20.	χ^2	Chi-square
21.	K-S Test	Kolmogorov-Smirnov Test
22.	S-W Test	Shapiro-Wilk Test
23.	VIF	Variance Inflation Factor
24.	EFA	Exploratory Factor Analysis
25.	CFA	Confirmatory Factor Analysis
26.	KMO	Kaiser–Meyer–Olkin
27.	CMB	Common Method Bias
28.	AVE	Average Variance Extracted
29.	CR	Composite Reliability
30	A	Cronbach Alpha
31.	ASV	Average Shared Variance
32.	MSV	Maximum Shared Variance
33.	DF	Degree of Freedom
34.	CMIN/DF	Chained Multilateral Index Number per DF

Sr. No	Abbreviations Full Form	Full Form
35.	GFI	Goodness of Fit Index
36.	AGFI	Adjusted Goodness of Fit Index
37.	CFI	Comparative Fit Index
38.	NFI	Normed Fit Index
39.	TLI	Tucker–Lewis Index
40.	PNFI	Parsimony Normed Fit Index
41.	PCFI	Parsimony-Adjusted CFI
42.	RMSEA	Root Mean Squared Error Approximation
43.	SEM	Structural Equation Modelling
44.	S.E.	Standard Error
45.	C.R.	Critical Ratio
46.	LLCI	Lower Limit Confidence Interval
47.	ULCI	Upper Limit Confidence Interval
48.	B	Beta
49.	SP	Sustainable Product

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Abstract

The present study investigates the role of propensity to anthropomorphise nature (PAN), connectedness to nature (CN), man-nature orientation (MNO) and love of nature (LN) on the behavioural intention towards sustainable products (SP). Drawing insights from important theories like theory of planned behaviour, Sternberg's triangular theory of love, interdependence theory, three-factor theory of anthropomorphism and biophilia hypothesis respectively, we argue that CN and MNO are crucial factors that creates emotional affinity and sense of responsibility among individuals to work towards sustainable development and protect nature. Furthermore, we also identified when nature is humanised by marketers and policymakers, it further strengthens sustainable consumer behaviour among those who are connected to nature and high on nature orientation. We also account for the role of involvement (INV) with the product category based on the elaboration likelihood model (ELM) in guiding behavioural intention towards sustainable products. We have selected sustainable apparel (SA) as the product category to test the conceptual model thus providing useful insight in the context of sustainable apparel.

Through mixed method research design, we collected survey data from 588 educated urban consumers of India through convenience sampling and the data is analysed using structural equation modelling using IBM SPSS AMOS. The findings of this study provide empirical support for the research hypotheses and uncover positive role of LN, MNO and CN on BI towards SP. Furthermore, PAN and INV with the product category have differential moderating effects on BI towards SP. Thus, the study provides important insights into the role of the human-nature relationship and emotion in influencing sustainable consumer behaviour to policymakers and practitioners. The present work also contributes to the research on SA especially in the developing country context like India where in order to meet the Sustainable Development Goals, government is promoting production and consumption of apparel in sustainable ways. The findings of the study have important theoretical and managerial insights that further provide clarity and recommendations for building human-nature relationships to foster Sustainable Consumer Behaviour (SCB).

Chapter I

Introduction

1.1   Background of the Study

"The planet does not need money; it needs behavioural change"

- Sonam Wangchuk, The Award-Winning Environmentalist

There are growing concerns in our society with regard to rising environmental issues like climate change, pollution, waste management, frequent disaster, loss of biodiversity, resource scarcity, etc. (Lu and Kwan, 2023; Balderjahn et al., 2013). In the current capitalist economy, unsustainable consumption of resources by the industry as well as the consumers is one of the main reasons for growing environmental concerns (Morris et al., 2024; Barbarossa and De Pelsmacker, 2016; Geller, 2002). There is massive stress on Mother Nature due to unsustainable consumption patterns by consumers and industries that are rising above sustaining limits of the planet leading it to a destructive path and thus threatening the survival of mankind (Nangia et al., 2024; Sheoran and Kumar, 2020). Therefore, there is an urgency to work towards sustainable production and consumption (Gidaković et al., 2024; Kasim et al., 2021). Environmentalists, ecological economists, policymakers, global forums etc. have advocated the need to evolve beyond capitalism and make concentrated efforts to address these issues. Such efforts thereby safeguard the interest of the whole society and the planet (Giannetti et al., 2023; Dhir et al., 2020). For example, the global forum United Nations has outlined Sustainable Development Goals (SDGs), 2030, and has urged nations to address growing environmental and social issues by regulating their consumption behaviour (Kautish et al., 2020). Specifically, Goals 12 and 13 deal with the issues of environmental sustainability and climate change. Goal 12 deals with "*climate change mitigation*" and calls for more actions from government, businesses, policymakers, academia and individuals to take necessary actions against global warming and climate change (White, Habib, and Hardisty, 2019; McDonagh and Prothero, 2014). The annual estimated cost for climate change measures is about to reach US $300 billion by 2050 (Leal Filho et al., 2023). This calls for the need to decouple this kind of economic growth (Gupta and Singh, 2020) through the combined efforts of all the stakeholders. Goal 13 deals with "*responsible consumption and production*" where all the stakeholders namely the industry as well as the consumers are required to take actions to transition towards *"a sustainable and resilient path" (*UN ESCAP 2016, *p. 1*). However, there is an ongoing belief that as all the economies of the world are revolving around consumption-driven growth, the achievement of these goals is going to be a complex and difficult task (Garg et al., 2023; Wang et al., 2019).

Kulkarni and Lefebvre (2018) argued that businesses act as a catalyst in promoting environmental sustainability. There is growing pressure on the industry from environmental advocates to incorporate sustainability agendas in their production aspect and other business

practices as part of their environmental corporate accountability (Rashid et al., 2024; Romani, Grappi, and Bagozzi, 2016). Many brands are now working towards the achievement of SDGs thereby facilitating conditions for pro-environmental consumer behaviour (Paswan et al., 2017). For example, McDonald's created a *"scale for good"* to incorporate environmentally sustainable practices into its corporate strategy. Godrej Consumer Products also started an incentive scheme for consumers for exchanging old products for eco-friendly ones. Besides, NDTV, a media group, also started a *'Greenathon'* campaign to generate awareness for sustainable development (Taufique et al., 2021, 2018). Other firms like Titan, Tanishq, etc. have also started campaigns to promote the use of recycling bags for shopping. Idea Cellular Limited is promoting the idea of the conservation of natural resources (like trees) for sustainable development. Nerolac Paints has also created a range of eco-friendly paints by removing hazardous metals from its paint that are harmful to nature. Thus, industry has started to invest in sustainable measures for mitigating climate change and environmental degradation as well as to gain a competitive edge. Hence, supply-side initiatives exist at a macro level to address the growing environmental concern (Bose et al., 2024; Daniel, 2017). As witnessed in the emerging *'eco-preneuring paradigm',* much of the efforts with regard to the achievement of sustainable development goals are largely centred on the production aspects (Sharma et al., 2024; Wei et al., 2018). However, it needs to be balanced by the demand side as the sustainability of the economy and the planet depends on the sustainable consumption process.

There is a growing realization that environmental concerns are linked with consumer consumption patterns too and changing the consumption pattern towards sustainability is equally crucial for the achievement of SDGs (Kilbourne and Carlson, 2008). Therefore, various initiatives are constantly being taken up by global forums, governments, public agencies and industry to incorporate a sense of responsibility among individuals towards environmental protection (Duong, 2024; Shrivastava, 1995). As a result of these concentrated efforts and awareness campaigns, there is a growing consciousness among consumers to make concentrated efforts for nature as well as society well-being (Hristov et al., 2022; Johnstone and Hooper, 2016) that in turn can result in their own well-being too (Nguyen, Lobo, and Greenland, 2017). A recent World Wildlife Fund report published in 2021 has termed this interest and consciousness as *'eco-awakening'* and reported that there is a 16% rise in public interest in environmental affairs and discussion around this topic of biodiversity

and environmental sustainability has increased by 65%, especially in the social media context (van Breda et al., 2023). However, as urged by United Nations recently, there is a need to make more efforts for ensuring consumer engagement and participation in activities related to environmental protection because consumers yet do not "walk their talk" (ElHaffar et al., 2020; Carrington et al., 2010) and still they continue to buy and exhibit behaviour that is harmful to nature (Patwary et al., 2022; Wiederhold and Martinez, 2018; Devinney, Auger and Eckhardt, 2010). Therefore, exploring the phenomenon of sustainable consumer behaviour (SCB) is of immense importance for the achievement of SDGs as advocated by global forums, academia and the public at large (Maduku, 2024; Minton et al., 2015).

1.2   Purpose of the Study

Consumers are the agents of social change and they can influence the system as well as the institution (Thiermann and Sheate, 2020). Consumers are the key driving forces of sustainable production and development and therefore the area of SCB has received increased importance from academia as well as practitioners (Duong, 2024; Wang et al., 2017; Romani et al., 2016). SCB is a complex process of social transformation (Fien and Tilbury, 2002) and for the attainment of SDGs, strategies persuading consumers to follow sustainable practices are needed (Ruzgys and Pickering, 2024; Schultz, 2011). Sustainable consumption practices involve purchase of green or eco-friendly products, shared use of the products, reduced consumption to the minimum and disposal practices like reuse and recycling (Lanzini and Tencati, 2023; Schöggl et al., 2020; Gordon et al., 2011). For the present work, we defined sustainable consumption behaviour by focusing on all three dimensions across the product lifecycle (PLC) namely green purchase, reuse and recycle following the existing studies namely Dong et al. (2020) and Ketron and Naletelich (2019).

The phenomenon of sustainable consumer behaviour has been studied in the existing literature from varied perspectives (Goyal et al., 2022). However, how an individual relationship with nature guides behaviour requires more attention. The human-nature relationship is *"the view that people hold about their appropriate relationship with nature"* (van den Born, 2008, *p. 87*). Environment-related behaviour being altruistic in nature can be better understood through understanding the role of human-nature relationships in guiding environment-related behaviour (Park and Lin, 2020). Thus, it can be inferred that developing

and fostering the human-nature relationship is crucial to motivate environment-related behaviour of an individual. This sustained behaviour change among them will generate more useful insights needed to address the role of the human-nature relationship.

In the extant literature, there exist a number of theories that guide environment-related behaviour of an individual, however, more insights are required to comprehend the role of the human-nature relationship in fostering environment-related behaviour as argued by various scholars (Ives et al., 2017; Davis et al., 2009). Existing literature dealing with the human-nature relationship has focused on various cognitive and psychographic dimensions like concern for nature, environmental values, environmental identity, perspective-taking, environmental attitude, nature exposure, connectedness to nature, engagement with nature, etc. (Garg et al., 2023; Lubowiecki-Vikuk et al., 2021; Rosa and Collado, 2019; Perkins, 2010; Mayer and Frantz, 2004; Clayton, 2003; Schultz, 2000; Kals, Schumacher, and Montada, 1999). The cognitive aspects of the human-nature relationship have been studied to understand their role in environmental behaviour change, however, the role of affective aspects (like emotions) in influencing environmental-related behaviour of an individual need to be further studied to guide the researchers and practitioners to foster environmental behaviour change (Dong et al., 2020). The behaviour exhibited through internalised motivation like emotion is more effective and consistent than behaviour that results through the contextual forces (Thiermann and Sheate, 2020). Environmental-related behaviour being altruistic in nature can be promoted if the emotional aspect of human nature relationship is fostered and this thought is also reinforced by Seamon (1984) when he argued that "*love and responsibility for the earth cannot only be thought about cerebrally; they must be felt emotionally, with the heart*" (*p. 769*). Therefore, the role of emotion as an internal motivation to guide an individual towards environment-related behaviour is considered an area worthy of investigation.

It is crucial to gain insight into how nature can influence human emotion and why there are differences among individuals with respect to their relationship with nature i.e., why some individuals feel strongly towards nature while some of them are not at all affected (Maduku, 2024; Haj-Salem et al., 2022; McDonald et al., 2007). These are important questions that are to be addressed in the existing literature to better explain the environmental-related behaviour of an individual (Lumber et al., 2017). Therefore, the present work aims to explore the role of

emotion as an internalised motivation in influencing the environmental behaviour of an individual. Recently, few studies have explored the role of emotion in guiding environment-related behaviour, however, more research is required to gain insights on the effect of varied emotions on sustainable consumer behaviour (e.g., Maduku, 2024; Haj-Salem et al., 2022; Talwar et al., 2022; Piligrimiene et al., 2020; Yang et al., 2018).

1.3   Aim of the Study

Emotions are the instinctive or intuitive feelings mainly generated by personal experiences, knowledge or specific objects (Haj-Salem et al., 2022; Russell and Barrett, 2009). Emotions such as love, anger, pride, fear etc. are the intrinsic motives that are believed to promote and maintain more consistent environment-related behaviour (Lu et al., 2020). Besides, emotions also lead to more effective behavioural change than the external motivations that are promoted by global forums, government, policymakers and corporates (Habib et al., 2023). There exist many studies that promote the view that when people get emotionally involved with nature, they are more likely to adopt environment-related behaviour (e.g., Lv et al., 2024; Lu et al., 2020; Kanchanapibul et al., 2014; Meneses, 2010). In the extant literature on environmental philosophy, how specific emotion influences environment-related behaviour of an individual has received attention recently (e.g. Odou and Schill, 2020; Lu et al., 2020; Lerner et al., 2015). Specific emotions like guilt, pride, anger, anxiety, fear, love, etc. have been studied to understand their role in environmental-related behaviour to some extent, however, more exciting insights are needed for guiding the environmental-related behaviour of an individual (Liu, Nong, et al., 2022; Martin et al., 2020). For the present work, we aim to understand the role of specific emotion namely love of nature (LN) in promoting environmental-related behaviour of an individual as there is scarce literature linking LN and environmental-related behaviour (Dong et al., 2020; Lastovicka and Sirianni, 2011). On the basis of Sternberg theory of love, it is argued that the three components of love namely *'passion'*, *'intimacy'* and *'commitment'* affect the behaviour of an individual. This area is worthy of investigation because as emphasised by existing studies love of nature promotes sustained behaviour change by triggering a feeling of concern, care, protectiveness or responsibility among individuals (Dong et al., 2020; Zhao et al., 2018; Dong et al., 2018).

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One of the most critical pitfalls of the theory of planned behaviour (TPB) is that it is purely rational or cognitive in nature and does not account for emotional factors that are known to have an influence on human judgment, belief and behaviour (Wang et al., 2024; Dangelico et al., 2021; Kim et al., 2013). Therefore, we accounted for the role of LN in TPB along with the other components of the theory namely *"attitude towards the behaviour (ATT), subjective norms' (SN)* and *perceived behavioural control"* (PBC) in influencing sustainable consumption intention of an individual. Thus, the present work also aims to extend TPB by including the affective or non-cognitive dimensions of love.

There are calls from researchers who have explored the role of LN in influencing SCB to explore the potential antecedents and consequences of LN to better explain the phenomenon (Dong et al., 2020). Many researchers have proposed to explore the role of cultural values and other internal motivations in influencing SCB. The present work identified two important dimensions namely man-nature orientation (MNO) and connectedness to nature (CN) in influencing the specific emotion namely the LN that in turn guides the environment-related behaviour of an individual. Based on the interdependence theory, MNO is the cultural value that is found to impact environment-related behaviour of an individual (Sreen et al., 2018; Chekima et al., 2016; Chan, 2001). Therefore, how man-nature orientation influences the emotional and cognitive elements of the TPB is explored in the present work. Besides, CN that takes an emotional route is the feeling of oneness with nature or the interest in forging a connection with nature (Wilson, 1986). Recently there is a growing interest among scholars to explore the link between connectedness to nature and environment-related behaviour of an individual (e.g., Atik et al., 2023; Kautish et al., 2021; Jaiswal and Bihari, 2020). Through the present work, we also explored how CN can influence the affective and cognitive elements of TPB.

Few studies explored the link between MNO as well as CN with environment-related behaviour of an individual (e.g., Kautish et al., 2021; Sreen et al., 2018). However, when and how MNO and CN can lead to environment-related behaviour is not clear and needs more attention. We believe that the propensity to anthropomorphise nature (PAN) along with values and emotions might have a greater influence on individual SCB. According to the three-factor theory of anthropomorphism, if an individual treats nature as a human, then there is an emotional attachment between nature and humans and it affects their cognitive thoughts

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and beliefs (Tam et al., 2013). This, in turn, guides them that one should live in harmony with nature and should not take any actions that impact nature. We, therefore, propose that the effect of CN and MNO is higher on consumer who anthropomorphise nature. Thus, we also look at the moderating effect of PAN in influencing the role of MNO as well as CN on TPB constructs and LN.

1.4   Indian Knowledge Ecosystem

The role of cultural values in guiding the environment-related behaviour of an individual needed more insights as culture is one of the most important determinants of consumer behaviour and is widely used in the developed market to explain sustainable consumer behaviour (Özekici, 2022; Kuanr et al., 2021; Rahman and Reynolds, 2016). To the best of our knowledge, there exists little literature on emerging market contexts especially India exploring the path from cultural values to the emotional path to behavioural intention to exhibit sustainable consumer behaviour. Thus, the present work aims to cover these knowledge gaps by creating the path from the cultural dimension to the emotional route and to behavioural intention to drive sustainable consumption in the emerging market context particularly India. In the extant literature, the researchers do not find much insight into the role of man-nature orientation in the sustainability aspects specifically in the Indian context. How and when man-nature orientation impacts sustainable consumer behaviour might showcase a better viewpoint to the practitioners and academic community to better understand Indian consumers' sustainable behaviour.

Existing studies linking CN with environment-related behaviour are largely done in the developed Western country context (e.g. Pearce et al., 2022). There is a need to fill the knowledge gaps by exploring more useful insights on the role of CN and exploring if CN is contextually sensitive. It is argued that different populations or cultural differences would create a differential impact of CN on sustainability aspects due to diverse responses (Atik et al., 2023; Restall and Conrad, 2015). Particularly, in Indian culture, exploring the role of the emotional connectedness of nature in guiding the human-nature relationship is an interesting phenomenon to explore because Indians have inherited through their traditions and beliefs the environmental values and given importance to nurturing and protecting nature (Sreen et al., 2018). Indian culture believes in being in harmony with nature, and it is being reflected and

nurtured in a variety of rites and rituals, arts, crafts, and daily lives of Indian people. It is reflected in their rites and rituals when they worship various natural forms like rivers, trees, idols etc (Sreen et al., 2018). Human-nature connectedness can be used to promote protective links and to generate a sense of responsibility towards nature (Shimul et al., 2024). According to the Indian philosophy (Advaita), the same *"atman"* (soul) is present in everything including Nature (Ranganathananda, 1995, *p. 83*). Indians treat nature as human and therefore insights into the phenomenon in the Indian context can be of use to practitioners to address environmental-related issues. A meagre number of studies exist that focus on the phenomenon of anthropomorphism of nature in the Indian context (e.g. Jaiswal, 2020). More pieces of evidence are required to understand the cognitive and affective dimensions of anthropomorphism on sustainable consumer behaviour.

"Human beings are at the centre of sustainable development concerns and are entitled to a healthy and productive life in harmony with nature" clearly states the "*National Environmental Policy 2006"*, a policy initiative by the Government of India to drive sustainable consumption and production. India currently is at a crucial stage of transitioning from a developing nation to a developed one and is currently facing ample challenges in the achievement of the SDGs, 2030. However, as evident India's preparedness for the achievement of SDGs is worsening from India's declining position with 121 rank and a score of 61.92 (Carlsen and Bruggemann, 2022). Thus, it can be inferred that India has a long way to go to achieve its sustainable development to protect Mother Nature along with also ensuring economic development, advanced lifestyle and rapid urbanisation. SCB is crucial to the achievement of SDGs. Therefore, more scholarly attempts are required to guide practitioners and policymakers to promote sustainability aspects specifically with regard to the Indian context (Muralidharan et al., 2016). Besides SDGs, many such other policy-level initiatives for sustainable development are also evident at the government level. For example, the National Air Quality Index, one of its kind, was launched in 2015 with the aim of carbon emissions reduction by 33%–35% by 2030 (Zhan et al., 2018). Besides, in the context of apparel, Government of India (GoI) in 2019 launched the Project SU.Re i.e. Sustainable Resolution towards fashion and the apparel industry is expected to transition towards a sustainable pathway by 2025. Thus, the present work aims to guide the practitioners as well in the apparel industry to achieve these sustainable targets.

1.5   Relevance of the Study

The present work aims to bridge the knowledge gaps in the following ways. The present work guides marketers in the achievement of sustainable production and consumption among SDGs which UN has declared as a focus area for the well-being of nature by identifying and exploring the crucial factors that affect sustainable consumption intentions. The present work also supports the contention that consumers can go beyond pure consumerism and can make choices that can go beyond their self-interest and work towards nature's well-being. A very few studies, especially in the emerging market context, have explored the role of the human nature relationship in predicting environment-related behaviour of an individual as per our knowledge. Through the present work, we aim to cover this research gap by identifying a path from human-nature relationship constructs to the TPB constructs through an emotional route namely attitude, subjective norm, perceived behavioural construct, love of nature and behavioural intention towards sustainable products, particularly sustainable apparel. Thus, we extended the TPB by incorporating the role of emotion, specifically LN as an emotional basis in explaining BI of an individual. Thus, by correlating emotions with behaviour, we extended prior work. We identified the role of LN on sustainable consumer behaviour and examined the interacting effect between humans and nature to understand how they purchase, consume and handle products through the PLC for the welfare of nature. Through the present study, we proposed different mechanisms to explain how different dimensions of love of nature impacts sustainable consumption across the product life cycle. Besides, we also contributed to prior research on LN by identifying MNO and CN as potential antecedents of the LN. The practitioners and policymakers can harness the power of important dimensions of human-nature relationships like the love of nature, man-nature orientation, connectedness to nature and propensity to anthropomorphise in influencing sustainable consumer behaviour. Through the present work, we also explore the role of MNO and CN in influencing SCB across the PLC namely green purchase, reuse and recycling through the various components of love of nature namely passion, intimacy and commitment. We also explored the moderating effect of anthropomorphism of nature to understand the individual differences in guiding the relationship between MNO and CN with the emotional aspect of love of nature and TPB constructs. Thus, the study provides important insights into the role of the human-nature relationship and emotion in influencing sustainable consumer behaviour to policymakers and practitioners. The present work also contributes to the research on sustainable apparel, especially in the developing country context like India where in order to meet the SDGs, the

government is promoting the production and consumption of apparel in sustainable ways. For example, Sustainable Resolution (SU. Re) is a project launched in 2019 by the Government of India to promote the concept of sustainable apparel among industry and consumers.

1.6 Limitations of the Study

The present work is also not devoid of theoretical, methodical and managerial limitations. In terms of methodical limitation, convenience sampling limited to only the Indian context employed in the present work may limit the generalizability of the findings. We rely on a few theories to understand the role of love of nature, man-nature orientation and connectedness to nature on behavioural intentions and adapt it to the marketing context that may pose limits to the study. Considering the nature of the constructs involved in the study, there could be bias in the responses due to the social desirability in the responses that further may limit the generalizability of the findings.

1.7 Organization of the Study

The thesis is divided into the following chapters. The first chapter discusses the literature on important phenomena/constructs like sustainable consumer behaviour, the role of emotion in influencing sustainable consumer behaviour in particular the role of love of nature, connectedness to nature, man-nature orientation and propensity to anthropomorphise nature. The second chapter discusses the theoretical underpinning used in the present work namely the Theory of Planned Behaviour, the Three-factor Theory of Anthropomorphism, the Elaboration Likelihood Model, Sternberg's Theory of Love etc. The third chapter highlights the research gaps and research objectives to be achieved with the present work. The fourth chapter proposes the conceptual background and hypothesis development along with the research model. The fifth section discusses the research methodology context, target population, and product category used to test the proposed research model. Thereafter in the sixth chapter, pilot and main results are discussed followed by the discussions. Finally, the next chapter discusses the managerial and theoretical implications followed by the limitations of the study and the future scope of the research.

Chapter II

Theoretical Framework

2.1   Theory of Planned Behaviour

The popular theory of planned behaviour (TPB) by Icek Ajzen is widely used in the domain of consumer behaviour. This theory is further extended on the basis of the theory of research action (Ajzen, 1991*, p.182*). Taking into consideration three beliefs namely *"behavioural beliefs", "normative beliefs" and "control beliefs"*, the theory argues that it could lead to the formation of outcomes such as *"attitude towards the behaviour", "subjective norms" and "perceived behavioural control"* respectively. Extant literature has witnessed the use of TPB widely to explore the phenomenon of environment-related behaviour in various contexts (Wang, Wang, et al., 2022; Pristl et al., 2021; Taneja and Ali, 2021; Kumar et al., 2021; Dangelico et al., 2021; Chen, 2020; Kim and Seock, 2019; Moser, 2016; Kang et al., 2013). All three outcomes can lead to the formation of behavioural intentions that are discussed in detail below.

2.1.1 Behavioural Intention

Intention can be defined as *"indicators of how hard people are willing to try to perform the behaviour" (*Ajzen*, 1991, p.183)*. This is a widely used *"social-psychological model"* of consumer behaviour. According to TPB theory, *"attitude, subjective norms and perceived behavioural control"* are the main antecedents of behavioural intention as well as the subsequent behaviour of an individual. Ajzen (1991) stated that the influence of these three

predictor variables differs across behaviour and situations. The theory argues that a positive attitude with compelling social norms and strong control factors can strongly influence behavioural intention and subsequent behaviour of an individual (Perera, Kalantari Daronkola, and Johnson, 2022; Pristl et al., 2021; Taneja and Ali, 2021; Asadi et al., 2021; Orazi and Chan, 2020; Sparks et al., 2014; Rise et al., 2010). A meta-analysis of TPB strongly supports the validity of the theory in terms of the percentage of the variance explained in predicting the outcomes namely intention and subsequent behaviour (Godin and Kok, 1996).

2.1.2 Attitude

Attitude can be defined as *"the individual's favourable or unfavourable evaluations of performing a particular behaviour" (*Ajzen, 1991*, p. 184*). As per this theory, attitude positively influences the behaviour of an individual (Asadi et al., 2021; Orazi and Chan, 2020; Sparks et al., 2014). Attitude is the result of behavioural belief and outcome belief. Behavioural belief reflects an individual's belief regarding the expected outcome when engaged in a specific behaviour whereas outcome belief refers to the likelihood of a particular outcome after the performance of a behaviour. Attitude positively influence the behavioural intention towards the sustainable products (Asadi et al., 2021; Orazi and Chan, 2020; Sparks et al., 2014).

2.1.3 Subjective Norm

The second element of the theory is the subjective norm that reflects *"an individual's perceptions of general social pressure" (*Ajzen, 1991*, p.184).* If the person thinks that society approves of behaviour then he is more likely to form a positive intent to exhibit a particular behaviour and vice versa (Asadi et al., 2021; Minton et al., 2018; Lundblad and Davies, 2016; Panzone et al., 2016; Eom et al. 2016; Salazar et al., 2013; Steg and Vlek, 2009; Milfont, Sibley and Duckitt, 2009; Harris, 2008).

2.1.4 Perceived Behavioural Control

The last component of this theory is perceived behavioural control. It can be defined as *"the control factors that are concerned with the perceived influence of specific factors to facilitate*

or inhibit behaviour" (Ajzen, 1991*, p.185*). For the present work, we have considered perceived environmental responsibility as the PBC component of TPB and extant literature suggest that PER positively influence the sustainable consumer behaviour (Culiberg et al., 2022; Ahn and Kwon, 2022; Ghazali et al., 2019; Ünal et al., 2019; Ma et al., 2019; Steg and Nordlund, 2018; Rezvani et al., 2017; Bronfman et al., 2015)

2.1.5 Inclusion of Other Constructs/Variables in the TPB

It is believed that three antecedents namely *"attitude towards the behaviour, subjective norms and perceived behavioural control"* are the key factors affecting the intention and subsequent behaviour of an individual, however, prior research has also incorporated other domain-specific or other factors that are not part of the theory (Wong et al., 2024; Donald et al., 2014). Several meta-analyses have raised concerns over the effectiveness of this theory as it has several limitations that call for the need to add constructs to improve its conceptual and operational effectiveness (Tang and Jaing, 2024; Manning, 2009; Conner and Armitage, 1998). Specifically, in the psychological literature, there is increasing evidence of the studies that have included other important constructs in the TPB model (Michael et al., 2024; Yazdanpanah and Forouzani, 2015). This is evident especially in the context of sustainable consumer behaviour with the aim to increase the predictive capability of the theory. Further, many scholars have broadened and deepened the framework through the addition of novel constructs or changing the path of the constructs in the existing model (Wong et al., 2024; Lu et al., 2020; Perugini and Bagozzi, 2001). Appendix I shows selected literature augmenting other constructs along with the TPB constructs specifically in the context of sustainable/green/environmental consumer behaviour. Thus, it can be inferred that new constructs add to the predictive capability of the theory. In our present work, we have also added novel construct namely love of nature in the TPB to add to the explanatory power of the theory. We have considered *'love of nature'* as an emotional pathway in the framework as it acts as a crucial element in the case of environmental behaviour. Even psychologists argued that environment-related behaviour is altruistic in nature, emotions can also drive such behaviour. Love of nature positively influences the sustainable consumer behaviour of an individual as suggested by scholars (Dong et al., 2022; Dong et al., 2020).

2.1.6 Theory of Planned Behaviour and Sustainable Consumer Behaviour

This theory is widely used for studying consumer behaviour around 68,152 times till March 2021 as identified by Sheoran and Kumar (2020). In environmental sciences studies too, there is a wide array of applications of this theory as it offers useful insights not only for predicting human behaviour but also for building social, economic and environmental sustainability (Wang, Wang, et al., 2022). Since its inception, the theory is widely used to understand the various factors that determine environmental-related behaviour of an individual in both organisation and individual settings. For example, low-carbon consumption (Jiang et al., 2019), energy saving (Allen and Marquart-Pyatt, 2018), water conservation and recycling (Lam, 2006), use of other means of transportation (Muñoz et al., 2016), employee's green behaviour (Yuriev et al., 2020; Blok et al., 2015; Norton et al., 2013) etc. Researchers have identified how and why intention and subsequent behaviour of an individual towards sustainability can be impacted in different contexts (Dangelico et al., 2021; Judge et al., 2019; Johnstone and Lindh, 2018) through this theory (Giampietri et al., 2018). In the present study, we have merged the consumption cycle and TPB to understand consumer behaviour towards sustainability.

2.2 Sternberg's Theory of Love

Sternberg (1997, 1986) conceptualised the latent construct *'love'* as a three-dimensional construct consisting of the *"need for affiliation", "inclusion of the other in self"* and *"predisposition to help"*. The *"triangular theory of love"* is mostly used in the majority of the studies and it accounts for three factors as proposed by Sternberg (1997, 1986) namely *"intimacy, passion* and *commitment"*. Intimacy refers to *"feelings of closeness, connectedness, and bondedness in loving relationships."* This is an affective element and drives the feeling of closeness of an individual towards the loved object. The second dimension, passion, a motivational element, refers to *"the drives that lead to romance, physical attraction, sexual consummation, and related phenomena in loving relationships."* Commitment, the last cognitive dimension, refers to different things at different points in time. It is defined as *"the decision that one loves a certain other"* in the short run, and it is defined as *"one's commitment to maintaining that love"* in the long run. In the context of environment, this concept of love is widely explored recently (e.g. Kautish et al., 2022; Dong et al., 2020; Perkins, 2010)

2.3   Elaboration Likelihood Model

The *"dual process theory"* or the *"elaboration likelihood model of attitude change"* describes the two routes of persuasion for change of attitude namely *"central route and peripheral route"* (Petty and Cacioppo, 1986). When any information is reached via the central route of persuasion, careful consideration is given to all the information received and thoroughly processed. There is a high level of information elaboration that requires higher cognitive abilities. The attitude change that generates as a result of the central route of persuasion will have a lasting impact and is more enduring since active thinking is involved. The other route of persuasion namely the peripheral route does not involve active thinking and is more judgemental in nature. The message is processed on the basis of the merits of the source from which the message is received or on the basis of an individual's motivation and ability to process it. In the context of sustainability, the various products that are used as a context play a crucial role in driving the behavioural intention (e.g. Shen et al., 2024). In the extant literature, role of involvement with apparel as a product category in guiding the behavioural intention has been studied (e.g. Li et al., 2022; Kautish and Khare, 2022; Kumar and Yadav, 2021; Tung et al., 2017; Novak and Biocca, 2003)

2.4   Three-Factor Theory of Anthropomorphism

Anthropomorphism can be described as the "*tendency to imbue the real or imagined behaviour of non-human agents with human-like characteristics, motivations, intentions, or emotions*" (Epley et al., 2007*, p. 864*). As Guthrie initially suggested, anthropomorphism is an automatic process based on mental shortcuts. However, later a psychological account is given by Epley (2007) that advocates the cognitive process involved in the tendency to anthropomorphise a non-human entity. The three-factor theory provided an explanation of how, why and when people anthropomorphise a non-human entity. "*Effectance, Sociality and Elicited Agent Knowledge*" are the three motivational components for this phenomenon. Effectance means "*the need to make sense of the actions of other agents to reduce uncertainty concerning their behaviour*". Sociality is "*the need of people to maintain social connections*". In general, "*Elicited Agent Knowledge about humans or the self serves as a base for making inductive inferences about non-human agents*". The power of anthropomorphism as a marketing cue in various contexts is widely used and explored by researchers in the extant literature (Patrizi et al., 2024; Huang et al., 2024. Sun et al., 2024)

2.5   Biophilia Hypothesis

'Biophilia Hypothesis' is one of the key evolutionary theories describing the perspective of environmental connectedness as proposed by Wilson. He was the pioneer to disclose this idea into the scholarly discourse and defined biophilia as *"the innately emotional affiliation of human beings to other living organisms"* (Wilson 1986, *p. 31*). The *"biophilia hypothesis"* is defined as *"the innate tendency to focus on life and life-like processes" (*Wilson 1986*, p. 1).* Specifically, this theory is used for research in diverse areas like environmental education, sustainable urbanism, restoration and landscape environments, conversation, etc. (Gullone, 2000). Linking humans with the environment, Kellart (1983, p.375) stated "...*humans possess an inherent biological affinity for the nonhuman world that is instrumental to their health, productivity, and well-being".* In the extant literature, the concept of connectedness to nature has been explored in various studies to understand its influence of SCB (Atik et al., 2023; Wang et al., 2023; Kautish et al., 2022; Pearce et al., 2022; Jaiswal and Bihari, 2020)

2.6   Interdependence Theory

Interdependence theory by John Thibaut and Harold Kelley is one of the most well-known theories in social science studies. This idea has been developed over the years into a whole theory of social interaction, first by Kelley and Thibaut (1978) and later by others (such as Kelley et al., 2003). As a way to comprehend and analyse interpersonal events and interactions, Kelley and Thibaut (1978) created the interdependence hypothesis in social psychology. Over the course of the years, interdependence theory has transformed from a framework for examining group interaction processes into a taxonomy of social circumstances classifying interpersonal interactions. (Kelley et al., 2003; Kelley and Thibaut, 1978). MNO is a cultural value that guides the SCB as advocated by researchers (Sreen et al., 2018).

2.7   Triangulation of Theories

The triangulation approach is one of the most used approaches in social science research wherein the combination of different approaches is used by the researchers to get varied viewpoints (Bekhet and Jaclene, 2012; Neuman, 2006; Denzin, 1978). There are four different ways of triangulation namely methodological triangulation, triangulation of data,

triangulation of investigator and triangulation of theories (Flick, 2004; Jack and Raturi, 2006). Triangulation of data involves referring to different data sources for better results, triangulation of investigator involves the use of different investigators for evaluation, triangulation of methodology involves the application of mixed methods for data collection and triangulation of theories involves using different theoretical frameworks when understanding a particular phenomenon or situation for generating new insights in a study. Several existing pieces of literature dealing in the area of sustainable consumer behaviour have used multiple theories to generate new insights from different perspectives. In the present study, we have integrated different theoretical frameworks namely the Theory of Planned Behaviour, Sternberg's Theory of Love, the Three-Factor Theory of Anthropomorphism, the Elaboration Likelihood Model etc. as a base for developing the research framework.

In the next chapter, we reviewed the literature on each construct used in the research framework in line with the theoretical frameworks used as there is a general consensus that the theoretical framework underpinning each construct has a direct influence on the way research questions are identified and answered.

Chapter III

Literature Review

3.1 Importance of Sustainable Behaviour for Social Transformation

Sustainability is one of the evolving trends that is gaining attention among academicians, practitioners, marketers, behavioural scientists and policy makers (Hu, 2023; Giannetti et al., 2023; Voola et al., 2022; Mishra et al., 2022; Garg et al., 2023 Goyal et al., 2022; Makrides et al., 2021; Matharu et al., 2020; Park and Lin, 2020; Kempton et al., 2019; Dabbous and Tarhini, 2019). The consumption patterns of both the industry as well as the consumers have a tremendous impact on the environment that have resulted in global warming, environmental degradation, climate change, resource scarcity, poverty, social inequality, etc (Ruiz, 2023; Cheung et al., 2022; Deloitte, 2022; Calculli et al., 2021). Therefore, there is a dire need to shift the consumption patterns of both the industry and consumers to achieve the calls of sustainability (Hu, 2023; Mishra et al., 2022; Garg et al., 2023). At the production side, there is a need to shift the ways of doing business and at the consumption side, there is a need to shift the ways of buying, using and disposing off of the products (Duong, 2024; Golob et al., 2019; Schlaile et al., 2018). At the production side, many companies have come up with sustainable initiatives as a part of their corporate social responsibility (Duong, 2024; Han et al., 2020; Green et al., 2016). Besides, the emerging sustainable lifestyle of the consumers are also compelling them to incorporate sustainability in their business agenda for strategic benefit and increased profitability in the long run (Lu and Kwan, 2023; Giannetti et al., 2023; Olsen et al., 2014). Many Fortune 500 companies have come up with new products and

offerings, created niche markets for their sustainable offerings and leveraged new and innovative practices as part of their social and environmental responsibility (*Thiermann and Sheate, 2020;* Park and Lin, 2020). These, in turn, also help them to achieve a better perception of their brand among the stakeholders (Taufique et al., 2021; Golob et al., 2019). The companies with sustainable offerings in place also want the consumers to embrace such products and reward their sustainable initiatives (Makrides et al., 2021). At the consumption side, these needs to be balanced. Therefore, understanding sustainable consumer behaviour is of utmost importance for the achievement of SDGs (Giannetti et al., 2023; Voola et al., 2022).

Sustainable consumer behaviour, a broad umbrella term, was proposed by Oslo Symposium (Lu and Kwan, 2023). It highlights various themes like meeting the needs and wants of customers profitably, improving their quality of life by safeguarding nature, increasing resource efficiency through conservation and minimizing waste for avoiding environmental degradation. Sustainable consumer behaviour is thereby also linked with the triple bottom line aspect wherein focus is given to the economy, environment and society (Hu, 2023; Goyal et al., 2022; Dhir et al., 2021; Park and Lin, 2020; Dabbous and Tarhini, 2019). The broader view of the term sustainable consumer behaviour covers different aspects namely social concerns with regard to factory safety, community service and labour practices as well as environmental concerns like resource use, waste minimization, pollution control, etc (Ruiz, 2023). A variety of terms have been used in the extant literature for addressing the role of consumption on the environment and/or society such as *"socially responsible consumption"* (Falcão and Roseira, 2022; Antil, 1984), *"responsible consumption"* (Prendergast and Tsang, 2019; Fisk, 1973), *"ecologically concerned consumption"* (Henion, 1976) and *"sustainable consumer behaviour"* (Dong et al. 2023; Wolff and Schönherr, 2011; Schäfer et al., 2011; Kilbourne et al., 1997). Thus, there exist numerous definitions of the term *"sustainable consumer behaviour"* covering a range of dimensions namely social, ethical and environmental. For example, Wang et al. (2014) defined sustainable consumption behaviour as any consumption activity that is reasonable, proper, civilized and scientific in nature. Lee et al. (2015) only considered the environmental link of consumption i.e., *"environmental-friendly consumption"* with sustainable consumer behaviour. Thus, it was evident that there exist different definitions of the term sustainable consumer behaviour, and the measurement of these term across the literature is not identical in nature. There is an increased focus on understanding environment-related behaviour of an individual holistically by considering

each dimension of the PLC (Shahi et al., 2020). Few studies have considered every aspect of a PLC like purchase, use, treatment and disposal of the used products to understand the sustainability aspect (Dong et al., 2022, 2020). For example, Dong et al. (2022, 2020) defined sustainable consumer behaviour as green purchasing, reducing usage, reusing, and recycling. Thus, there is increasing importance given to gaining insights into sustainable consumer behaviour across the PLC and not just the initial stages like purchase. This is crucial because post-purchase behaviour like an extension of product use, extending the whole lifecycle of a product through reuse and recycling and proper disposal of used product is also critical with regard to its impact on the environment (Giannetti et al., 2023; Sheoran and Kumar, 2020a; Prothero et al., 2011).

In recent times, there is a growing awareness among individuals with regard to the adverse impact of their unsustainable consumption on the environment as well as the society and therefore they are now making more informed decisions to safeguard the environment (Han et al., 2020). There is a growing sense of responsibility to work towards sustainability (Culiberg et al., 2022; Kwon et al., 2020; Ghazali et al., 2019; Steg and Nordlund, 2018; Lee, 2009). With the changes in the lifestyle of consumers, there is an urgent need to better understand and gain insights into the emerging trends with regard to their behavioural changes (Cheung et al., 2022; Calculli et al., 2021). Therefore, it is crucial for marketers and policymakers to better understand consumption patterns and then devise suitable marketing and communication strategies to obtain the desired results and shift the behaviour towards sustainability (Nangia et al., 2024). It is essential for the firms to explore the critical variables that can impact the consumption behaviour of an individual (Green et al., 2016). These include cognitive, affective and conative dimensions as well as an understanding of how these dimensions are in turn influenced by the contextual factors and surrounding environment (Thiermann and Sheate, 2020). Extant literature has largely focused on gaining insights into individual-level characteristics that can help in changing the attitude of an individual towards sustainable consumption (Kumar et al., 2019; McDonald et al., 2007). There is a growing interest among scholars to build knowledge about the consumption pattern and therefore this field is witnessing contributions from diverse areas like sociology, psychology, economics and anthropology (e.g. Paul et al., 2021). There are emerging views on new perspectives of the marketing process and initiatives that lay a strong foundation for sustainable consumer behaviour. This is largely based on key psychological concepts like

values (Wang et al., 2023; Thøgersen and Ölander, 2002), beliefs (Zhao et al., 2021; Ajzen, 1991), attitude (Asadi et al., 2021; Orazi and Chan, 2020; Sparks et al., 2014; Stern and Dietz, 1994), emotions (Haj-Salem et al., 2022; Dong et al., 2021; Lu et al., 2020) and personality (MacDonald et al., 2008). Few studies have considered specific industries like fashion, electric appliances, durable products and energy for exploring sustainable consumer behaviour phenomenon (Chirani et al., 2021; Dong et al., 2020; Wang and Wu, 2016; Lundblad and Davies, 2016; Cho et al., 2015). For the present work, we have considered apparel as the product category to explore the sustainability aspect.

3.2   Sustainable Consumption in the Apparel Industry

The apparel industry is fast-moving (Environmental Audit Committee 2019; WRAP 2017) and therefore fashion and sustainability seem to be quite contradictory to one another (Li et al., 2022; Kautish and Khare, 2022; Kumar and Yadav, 2021; Dhir et al., 2021; Gupta et al., 2019; Khare and Sadachar, 2017; Cho et al., 2015; Kang et al., 2013). Fashion apparel is characterized by a short product life cycle due to emerging fashion trends (Kumar and Yadav, 2021). Companies are expected to develop new product lines owing to shorter PLC while sustainability calls for more durable use and reuse of the products (Chi and Zheng, 2016; Cervellon et al., 2010). However, these days owing to the increasing stress on fashion brands and retailers from global forums and governments, there are significant efforts by this industry to incorporate sustainability aspects in their business practice (Srividya and Atiq, 2024). There is a growing interest in sustainable apparel and the sustainability movement in this industry has taken off since the last few decades (Ulrich et al., 2024). For example, Vogue, one of the widely known fashion and lifestyle magazines, labelled the *'environment'* as the latest fashion trend. This movement started in 2009 when *"New York Fashion Week " inaugurated "Eco Fashion Week"*. Later, in 2010, the first sustainable fashion show was officially launched at *"London Fashion Week 2010"* (Davies and Streit, 2013). Furthermore, many high-street fashion giants like H&M, Louis Vuitton, Zara, etc. have recently incorporated sustainable apparel in their business practices (Wiederhold and Martinez, 2018). With the growth of the digital market, many online retail brands like People Tree, Komodo, Nykaa Fashion, Myntra for Earth, etc. have also recently came up with sustainable initiatives (Harris et al., 2016).

The current apparel industry is accounting for about ten per cent of the global CO_2 emission thus making it one of the most unsustainable industries (Busalim et al., 2022; Dhir et al., 2021). Specifically, the apparel waste contributes primarily to the issues of this industry during the last decade (Jacobs et al., 2018; Armstrong et al., 2015). Besides, the process involved in the manufacturing of the apparel like dyeing, bleaching, rinsing, etc. also contributes heavily to environmental degradation (Tey et al., 2018; Anguelov, 2015). The problems related to the stocking and disposal of used apparel are further contributing to environmental degradation (Ozdamar Ertekin and Atik, 2015). For example, it is estimated that post-production every year across the globe approximately *"1.7 kg of garments per capita" gets* wasted every year globally (Kirchain et al., 2015). In recent times, there is a tremendous increase in the consumption of apparel (Ozdamar Ertekin, 2016). The *"eco-efficiency"* of the apparel industry has increased recently, however, not at the same pace as the rise in carbon emissions (Peters et al., 2021). Owing to all these reasons, it is essential to focus on the issue of environmental sustainability of apparel industry through the promotion of sustainability. It is of paramount importance to find out ways of promoting greener or recycled apparel and safe disposal such as recycling (Davis and Aslam, 2024; Mukendi et al., 2020).

In the apparel industry, traditional business models are primarily aimed at maximization of profits through demand generation and meeting the needs, wants and emerging trends of the consumers without much concern for the environmental impact. Besides, the manufacturing units shifted its base to lower-cost countries owing to low-cost labour and other economic considerations (Byrd and Su, 2021; Wiederhold and Martinez, 2018; Harris et al., 2016; Goworek et al., 2012). There is a loss of intrinsic value of the apparel owing to the fast-changing trends, contemporary lifestyles, growing demand and shortened product life cycle leading to the current *"throwaway society"* resulting in excessive waste of valuable resources (Chu et al., 2015; Achabou and Dekhili, 2013; Goworek et al., 2012; Morgan and Birtwistle, 2009). This in turn negatively impacts useful natural resources like water, air, soil, etc. thus further worsening the global environmental stress. It is expected that the apparel industry would contribute to about *"148 million tons of waste"* by 2030 (Defarshi et al., 2022). There is a growing awareness of the negative environmental impact of the resource-intense apparel industry and therefore scholars and practitioners are exploring the phenomenon of incorporating sustainability in the business practices of fashion giants to guide them. In the

last decade, there is a growing interest to explore the drivers and inhibitors of sustainable apparel (Villa Todeschini et al., 2017). Recently many companies have started following environmental-friendly strategies in their business practices by incorporating organic cotton in their clothing range and following safe disposal practices (Armstrong et al., 2016). There is growing pressure on these fast fashion companies to incorporate sustainable practices across the product life cycle because just merely offering a few varieties of eco-friendly apparel or just introducing some donation drive for unwanted clothes is like dealing with only one single aspect of the apparel lifecycle that is not sustainable in the long run (Dhir et al., 2021; Gupta et al., 2019; Caniato et al., 2012).

Efforts have been made by scholars to uniformly define the term *"sustainable apparel"* which is often interchangeably used with other terms like *"eco-conscious"* (Tey et al., 2018; Connell, 2010)*, "eco-friendly"* (Rothenberg and Matthews, 2017; Laitala and Boks, 2012), *"green"* (Khare and Sadachar, 2017; D'Souza et al., 2007), *"ethical"* (Wiederhold and Martinez, 2018; Goworek et al., 2012; Joergens, 2006), *"organic"* (Matthews and Rothenberg, 2017; Hustvedt and Dickson, 2009). However, recently there is a growing consensus among the scholar nowadays in the conceptualization of the term *'sustainable apparel consumption'* that implies actions at every stage of PLC namely the acquisition of the apparel, storage of the apparel, usage of the apparel, care and maintenance of the apparel for prolonged life as well as disposal of used apparel (Stangherlin and Thøgersen, 2020; O'Connell 2019; Lundblad and Davies, 2016; Bly et al., 2015; Jacoby et al., 1977). Earlier, literature focused on the single stage of the PLC to understand how the negative stress on the environment could be minimized. Owing to growing environmental consciousness, the purchase of environmentally friendly, upcycled, biodegradable, or recycled fibres are in demand. Besides, attention is also paid to the societal and economic aspects like apparel manufactured in a fair working environment or the ones bought from second-hand shops or shared usage like rent (Armstrong et al., 2016; Cho et al., 2015; Goworek et al., 2012; Allwood et al., 2008). In the post-purchase stage, researchers have focused on gaining insights into how to promote reusing (through repair or cleaning) or recycling or donating of used apparel through appropriate strategies to safeguard the interest of the environment (Goworek et al., 2018; Laitala and Boks, 2012).

For the present work, we considered sustainable apparel behaviour as behaviour towards apparel as the product category. With regard to apparel, if one is reusing the apparel then it may delay the product usage cycle which in turn can increase the utility of the product. The recycling behaviour can lead to a decrease in resource consumption and promote conservation (Hellmann and Luedicke, 2018). Combining the definition given by Dong et al. (2020), this study primarily explores sustainable consumer behaviour towards apparel products as this behaviour involves processes like purchasing, reducing, reusing, and recycling. The United Nations in 2015 setup seventeen *"Sustainable Development Goals"* (SDGs) that are targeted for 2030. Among these goals, SDG12 specifically refers to *"sustainable production and consumption"* (United Nations 2019) that aims to reduce the use of resources by emphasising regulating consumption patterns through efficient management of resources (Gardetti and Senthilkannan Muthu Editor, 2020). SDG12 also aims to regulate the consumption pattern of the apparel industry (Cherny-Scanlon and Agnes, 2016). The excessive use of important resources like water, and the use of harmful materials like dyes, and pesticides leads to the creation of large amounts of waste marking unsustainable production and consumption (Bridgens et al., 2018). Recently numerous studies have aimed to understand the hazardous impact of this industry on the society and nature (Freudenreich and Schaltegger, 2020; Shrivastava et al., 2020). The existing literature on sustainable apparel is mainly focusing on parameters related to supply-side initiatives like supply chain management of production aspects. Also, there exist a number of studies providing insights into the consumption aspects specifically in the context of sustainable apparel choices (Dhir et al., 2021; Kumar and Yadav, 2021; McEachernEl et al., 2020; Haffar et al., 2020; Freudenreich and Schaltegger, 2020). The present work contributes to the consumption side of the sustainable apparels.

3.3   Behaviour Change Strategies for Sustainable Development

In order to achieve sustainable development goals to prevent environmental crises, it is important to shift the behaviour of consumers. In the era of consumerism, they are the *"agents of change"* rather than *"objects to be changed"* (Thiermann and Sheate, 2020; O'Brien, 2015). The conventional paradigm believes that the contextual factors in which individual lives drive their behaviour (Welch 2017; Swim et al., 2011). However, for transformation at a societal level, the mere consideration of contextual factors does not result

in sustained behaviour change. As advocated by recent advances in the area of social transformation, there is a need to consider individual perspectives and other spheres for the development of a social change framework as they are also guided by the community structure and personal viewpoint (McEachern et al., 2020)). As suggested in Figure 1 by O'Brien (2018), there are mainly three spheres of social transformation namely the *"practical sphere, political sphere and personal sphere"*. The practical sphere denotes specific acts or interventions taken to directly influence the desired behaviour change. As can be seen in Figure 1 and as advocated by Thiermann and Sheate (2020) in their study, most of the behaviour change strategies for achievement of sustainable development goals are targeting the practical spheres.
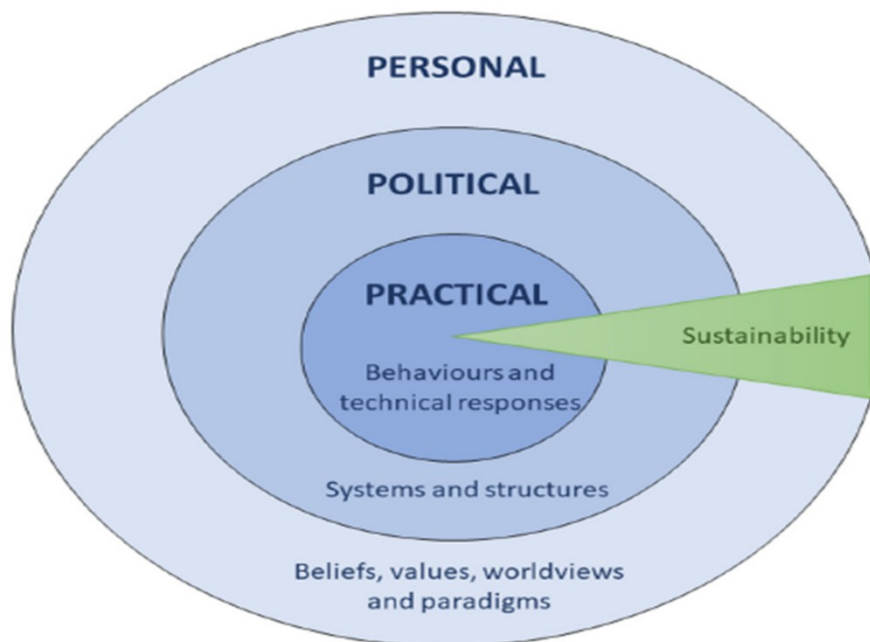
Source: Thiermann and Sheate, (2020); O'Brien (2018)

Figure 1 "Three spheres of social transformations and their relationships"

Ecological economists have advocated that most of the behavioural change strategies for sustainable development are targeted at the practical sphere as can be seen in Figure 1. However, for long-term sustained behaviour change, it is crucial to also consider the personal sphere. It is important to promote change in the personal sphere; for that, it is crucial to understand individuals' intrinsic motivation, which can be understood by diving deep into the psychological level (Shao et al., 2017; Clayton et al., 2016). A better insight into the role of emotion, motivation, and perceptions can help researchers to generate new avenues for fostering the environment-related behaviour of individuals. However, it has been noted that

little attention is given to understanding the role of emotions, motivation, and perceptions in guiding the environment-related behaviour of individuals (Mishra et al., 2021; Sharma and Jha, 2017; McDonald et al., 2012). Therefore, environmental psychologists argued that not only the structural and contextual factors but also the motivational factors that inhibit or direct the environment-related behaviour of an individual are critical to be addressed (Liu et al., 2017; Prothero et al., 2011). It has been acknowledged that intrinsic factors like values, beliefs, and worldviews are more effective and long-lasting as compared to extrinsic factors like incentives or regulations. (Wang et al., 2019; Geiger et al., 2018; Baum and Gross, 2017; Van Der Linden, 2015; Luchs et al., 2015; Hedlund-de Witt et al., 2014; Steg and Vlek, 2009). Therefore, the present work focuses on the role of intrinsic factors that can promote sustainable consumer behaviour

3.4 Role of Experiential Strategies in Human-Nature Relationships

Nowadays, humans spend most of their time indoors and are investing more time in technology and there is a detachment from nature. Therefore, humans are less thoughtful about the environment. Nature has different forms for different individuals based on the experiences an individual has with nature (Jaiswal and Bihari, 2020; Becker, 2006; McMichael et al., 2003). It can be seen as human and harmonious to someone while for others who had to fight for survival, it may instil fear (Holbrook and Hirschman,1982). Changes in human behaviour are crucial to solving the issues with regard to nature. Therefore, there is an urgent need to reconsider the human-nature relationship to protect the ecosystem and other important natural resources (van den Born et al., 2018; Baum and Gross, 2017; Steg et al., 2014; Nisbet et al., 2009; Kahn et al., 2009; Orr, 2004; Mayer and Frantz, 2004; Zukin and Maguire, 2004; Degenhardt, 2002; Schultz, 2002, 2001). There exists vast amount of literature advocating the role of the human-nature relationship. It advocates the orientation towards nature to protect the environment and foster environment-related behaviour (e.g., Kaur et al., 2022; Ahn and Kwon, 2022; Joshi et al., 2021; Nisbet et al., 2009; Orr, 2004; Mayer and Frantz, 2004; Degenhardt, 2002; Schultz, 2002, 2001). However, there is need to further explore ways to inculcate the human-nature relationship in order to motivate humans to act altruistically to tackle the worsening environmental crisis.

This is quite a complex phenomenon to understand and requires insights from various other disciplines to solve the issue at hand (Falke et al., 2022).

Consumption is a complex process influenced by cultural, social, and economic factors that guide the choice of an individual. An individual expresses their values, beliefs, and identity through the consumption pattern they exhibit (Zukin and Maguire, 2004). According to Holbrook and Hirschman (1982), consumption is an experiential process that reflects the symbolic, aesthetic, and hedonic nature of an individual. Thus, it can be inferred that the consumption process is highly influenced by various experiential processes that are determined on the basis of the values, beliefs, culture, and norms of an individual. Therefore, experiential strategies are the new class of environmental interventions that are advocated by the researchers. O'Brien (2018) suggested that strategies in the personal sphere guided by the personal experiences of an individual are critical for the achievement of the goals of the programs aimed at environmental protection particularly to reinforce environmental values and beliefs (Falke et al., 2022; Baum and Gross, 2017; Steg et al., 2014).

Experiential strategies are interventions that exert meaningful affective, physical, and cognitive experiences with regard to oneself, others, and nature. In the environmental disclosure, Becker (2006) proposed that personal experiences help an individual build a stronger relationship with nature. They advocated that experiential strategies are useful for positively fostering the relationship of an individual with nature. A study by van den Born et al. (2018) proposed that highly committed environmental activists are exposed to intense nature-based experiences during their childhood that promoted their inclination towards environment-related behaviour. For individuals who are highly inclined towards nature, merely exposing to nature virtually is not enough to substitute the exposure to real nature (Kahn et al., 2009). There are various policy support and other incentive-based programs in different countries to promote the environment-related behaviour of individuals.

3.5   Role of Emotion in Sustainable Consumer Behaviour

For the present work, we are considering the combination of two different routes together namely affective as well as cognitive. Consumption decisions are driven by a combination of affect as well as cognition (Shiv and Fedorikhin, 1999). In particular, environment-related

behaviour being altruistic in nature is more driven by affect than cognition. It is argued that individuals are motivated to engage in environment-related behaviour when they receive some hedonic pleasure (Corral-Verdugo et al., 2009). In the extant literature, there are many studies exploring the relationship between emotion and sustainable consumer behaviour and the results of these studies have documented that there is a remarkable impact of emotion on sustainable consumer behaviour. It can be driven by positive as well as negative emotions (Grappi et al., 2024; Habib et al., 2023; Haj-Salem et al., 2022; Kashmiri et al., 2019; Codini et al., 2018; Rezvani et al., 2017; Sun and Trudel, 2017; Onwezen et al., 2013). The specific emotions namely guilt (Maduku, 2024; Kaiser, 2006), anger (Contreras et al., 2024; Van Zomeren et al., 2010), pride (Rowe et al., 2019; Antonetti and Maklan, 214; Onwezen et al., 2014), regret (Cheng et al., 2019; Jang et al., 2013), sadness (Nerb and Spada, 2001), love (Dong et al., 2020), distress (Lee and Holden, 1999), awe (Piff et al., 2015), etc. have been explored in the existing literature. However, it is argued that certain emotions like anger or fear are not fruitful approaches because they are not driven by self-consciousness as argued by many scholars (Maduku, 2024; Oskamp, 2000). These emotions may backfire due to many disadvantages: people following these emotions may deny environmental threats as criticised by Meneses (2010). Moreover, other emotions like respect, love, pride, shame, shyness, embarrassment, etc. are given special emphasis in the extant literature because they are governed by the self-consciousness of an individual (Dong et al., 2020; Bodolica and Spraggon, 2011). These emotions are driven by self-awareness (Leary, 2004). People are able to experience these emotions only when there is a sense of living up to or failing to live up to an ideal or actual awareness state (Wang and Wu, 2016; Tracy and Robins, 2004). Therefore, many scholars support the view that self-conscious emotions are the best motivator of long-term behaviour change. For example, Pooley and O'Conner (2000) suggested that the ignition of self-conscious emotions is more powerful than the provision of knowledge in shaping environmental attitude of an individual. In the context of sustainable consumer behaviour, there is support for the view that marketers should devise strategies in such a way that provokes certain positive emotions with regard to nature to facilitate sustainable consumer behaviour (Contreras et al., 2024; Gonçalves, Lourenço, and Silva, 2016; Van Zomeren et al., 2010). For example, recently in a few marketing communication studies namely Aagerup, Frank, and Hultqvist (2019) and Wang et al. (2017) etc., emotional appeals are found to be more appealing in enhancing advertising effectiveness. Thus, the important role of emotions in influencing decision-making is well established (Kidwell et al., 2008), however, empirical pieces of evidence exploring specific emotions in guiding sustainable consumption behaviour

are lagging. Few studies recently studied the role of specific emotions in sustainable consumer behaviour. For example, the role of specific emotions namely pride, anger, guilt and respect on sustainable consumption intention have been explored by Wang and Wu (2016).

Pride, a positive emotion, is attached to a sense of attainment and worthiness (Tracy and Robins, 2007). It can be further classified into two distinct categories namely *"authentic pride"* and *"hubristic pride"* (McFerran et al., 2014). Authentic pride supports behaviour that is in line with personal standards and valued goals (Williams and DeSteno, 2008). Researchers have largely explored the role of authentic pride in the sustainability context and found a positive association between pride and sustainable consumption intention (Rowe et al., 2019; Antonetti and Maklan, 214; Onwezen et al., 2014; Onwezen et al., 2013). Guilt, a negative emotion, arises from the sense of responsibility for a negative consequence of an action (Maduku, 2024; Kaiser, 2006; Baumeister et al., 1995). Chen (2015) found that a sense of responsibility for damaging the environment generates a feeling of guilt that in turn promotes energy-saving behaviour. Personal norms when not taken care of give rise to feelings of guilt whereas when personal norms are satisfied can generate feelings of pride (Schwartz, 1977). Emotions like guilt and pride can guide decisions for incorporating sustainability aspects (Han et al., 2014; Onwezen et al., 2013). However, it is believed that guilt is as powerful as pride in guiding sustainable consumer behaviour (Peloza et al., 2013; Han and Ryu, 2012; Bamberg and Möser, 2007; Perugini and Bagozzi, 2001). Respect, also a self-conscious emotion, can be extended to another person in two ways namely ought-respect and affect respect (Mesquita, 2003). Ought respect is where each one deserves to be treated morally the correct way whereas affect respect is experienced in a special social relationship or context (Li, 2006). Respect generally may have a positive role in sustainable consumer behaviour. On the contrary, anger is a basic and negatively valence non-self-conscious emotion (Carver, Sinclair, and Johnson, 2010; Tangney et al., 2007; Baumeister, Vohs, DeWall, and Zhang, 2007). There exist few studies that have explored the role of anger on sustainable consumption behaviour. For example, knowledge of the seriousness of environmental problems can influence an individual's intention to boycott polluters. It can also act as a motivational trigger for the angry person to take corrective actions to protect the environment (Rozin et al., 1999).

Although these emotions have an influence on sustainable consumer behaviour, love as an emotion can have a long-term sustained impact on sustainable consumer behaviour. This emotion is under-researched, especially in the context of environment-related behaviour. Consequently, the present work aims to explore the role of a specific emotion *"love"* and identify the important psychological factors that can lead to the ignition of these emotions in the environmental context. An individual's emotional trade-off has a significant impact on behavioural intention, we believe that emotionally connected individuals are more concerned with regard to environment issues and it can shape the behaviour to act in order to protect nature. Love, a positive emotion, refers to the specific state of desire and compassion in the literature on marketing and consumer psychology (Dong et al., 2020; Oveis et al., 2010).

3.6 Love as a Concept

The concept of *'love'* has gained attention in the last decade and marketing researchers and practitioners are widely exploring this construct especially in the area of the consumer-brand relationship (Fournier, 1998; Aaker, 1997). The construct of love has historical and cultural roots. As per Hatfield and Rapson (1987), love cannot be theoretically conceptualized as it is intense and required faith. However, as we progressed in history, now there are different emerging views that conceptualize the construct of love. For example, sociology uses marriages, fertility rate, etc., and psychoanalysis uses sexuality to understand love. However, in consumer behaviour, we use the relational paradigm to understand the conceptualization of love. In consumer behaviour, love, a psychological state, can be defined as *"the constellation of behaviours, cognitions, and emotions associated with the desire to enter or maintain a close relationship with a specific other person"* (Aron et al., 1991, *p. 26*). Basically, it is a process of expansion of self to the loved person/ entity and the loved person/entity is an inclusion in the self.

As we progressed, two important views by Rubin (1970) and Sternberg (1986) emerged that evolved the concept of love. Rubin defined love as *"an attitude held by a person toward a particular another person, involving predispositions to think, feel, and behave in certain ways toward that other person"* (Rubin 1970, *p. 265*). Sternberg (1986, *p. 23*) conceptualized the *"triangular theory of love"* and defined it as *"a three-dimensional construct consisting of the need for affiliation, the inclusion of the other in self, and the predisposition to help"*. The

triangular theory of love is mostly used in the majority of the studies and it accounts for three factors as proposed by Sternberg (1997, 1986, *p. 26*) namely *"intimacy, passion, and commitment"*. Intimacy refers to *"feelings of closeness, connectedness, and bondedness in loving relationships."* This is an affective element and drives the feeling of closeness of an individual towards the loved object. The second element passion refers to *"the drives that lead to romance, physical attraction, sexual consummation, and related phenomena in loving relationships."* This component is a motivational element. Commitment, the last element that is cognitive in nature, refers to different things in the short and long run. In the short run, it can be defined as *"the decision that one loves a certain other"* whereas in the long run, it is defined as *"one's commitment to maintain that love."*

In the extant literature, there exist many studies that offer different ways of capturing the feeling of love (Kautish et al., 2022; Dong et al., 2020; Dong et al., 2018; Regan et al., 1998; Fehr, 1988). In the context of marketing, Shimp and Madden (1988) are the first authors to describe love as an emotion by adapting the emotion of love through the interpersonal theory of love proposed by Sternberg (1986). In their work, they adapted the three dimensions of love based on triangular theory in the consumption context of yearning, liking, and decision. The presence or absence of these three dimensions results in different relationships between brand and consumer namely functionalism, succumbed desire, non-liking, liking, utilitarianism, inhibited desire, loyalty and infatuation. Later, Ahuvia (2005b, a, 1993) studied the construct of love in different settings namely pets, places, objects, and ideas. These studies were the early ones to establish the meaning of love in different settings. However, critics argued that their work has some limitations in terms of conceptual clarity. For example, they considered satisfaction or well-being as the dimension of a feeling of love whereas these are generally identified as the outcomes of the feeling of love as established by the works namely Hendrick, Hendrick and Adler (1988) and Kim and Hatfield (2004). Ahuvia (1993) is based on Aron et al. (1986) that proposes a conditional integration theory that claims two types of constructs that are attached to the self namely the actual level and desired level of self-integration. They posited that the feeling of love is higher when actual as well as desired level of self-integration of love is high. Later, the extended work of Ahuvia (2005b) integrated the concept of love with the interpersonal theory of love towards an object that suggests that the feeling of love made the object more attractive, needful, and enduring. There exists a natural fit between the loved object and the lover. Wang et al. (2004) through

the application of an interpersonal love scale measured the feeling of love of bikers and found the effect of passion, altruism, and possessiveness. The present work aims to explore the concept of love in environmental context by exploring the role of love of nature in guiding sustainable consumer behaviour.

3.7   Man-Nature Orientation Values

Values are crucial in guiding and exploring consumer behaviour in marketing (Kumar et al., 2021; Vinson et al., 1977). The value aspect is explored in various disciplines like economics, psychology and anthropology. The conceptualisation of the term *'values'* was given by Schwartz as *"the concepts or beliefs about desirable end states or behaviours that transcend specific situations, guide selection or evaluation of behaviour and events and are ordered by relative importance"* (Schwartz and Bilsky 1987, *p. 13*). In the various studies in the field of marketing, this definition is widely used. There are large differences in the value orientations due to the difference in cultural dissimilarities, gender, occupation, social system, religion, class, education and political views (Özekici, 2022; Rahman and Reynolds, 2016; Xiao and Kim, 2009; Rokeach, 1973). Each country has different cultural values and value systems that affect the behaviour of individuals. In a country like India, the culture is rich in heritage, rites and rituals. *"India's ancient culture, rich in spiritual culture, is unmatched by any other culture in the world and its value system which is based on, and aims at, direct realization of the ultimate reality, holds great promise for the future welfare of the humanity"* (Bhajanananda, 1996*, p. 30)*. The tradition of India has a spiritual aspect of human values (Ranganathananda, 1995). Indian values inculcate in an individual the need to endure a strong cultural base for incorporating environmentally friendly values and a sustainable lifestyle (Sreen et al., 2018; Kala and Sharma, 2010). Since there is a limited understanding of the environmental objectives of an individual, the exploration of the role of such nature-oriented values on sustainable consumer behaviour can provide useful insights to scholars, practitioners and policymakers (Sreen et al., 2018; Stern and Dietz, 1994).

Values play a crucial role in defining the behaviour of an individual and driving consumption decisions (Lages and Fernandes, 2005). Clawson and Vinson (1978) emphasized the role of values when he stated that *"Values may prove to be one of the more powerful explanations of and influences on consumer behaviour. They can perhaps equal or surpass the contributions*

of other major constructs including attitudes, product attributes, and degree of deliberation, product classifications, and lifestyles." People often engage in those activities that help them in expressing and attaining their value system. They make efforts to adjust or change their consumption context or pattern to fit their value system (Schwartz and Bardi, 2001). Cultural values are influenced by society, beliefs, tradition, and religion that shape an individual's engagement in sustainable consumption behaviour. One of the goals of the present work is to explore the role of Indian values on the sustainable consumption behaviour of individuals as it is important to discuss the role of such values in shaping Indian views on matters related to the environment. Cultural values are the enduring beliefs that lead to the establishment of principles defining the relationship with nature in a particular society (Rokeach, 1973). As per the framework developed by Kluckhohn and Strodtbeck (1961) that is proved to be useful in different cultural settings in exploring the role of value orientation and interpersonal relationships, the cultural values can be categorised into five important dimensions namely *"man-nature orientation, man-himself orientation, relational orientation, past-time orientation and activity orientation".* For the present work, man-nature orientation is of particular interest. Indians place special emphasis on being in harmony with nature. Such thoughts are influenced by Buddhist philosophy. This philosophy portrays humans to be only a part of nature. It emphasises maintaining a harmonious relationship with nature and not trying to empower it. An individual must try to integrate and adapt with nature to achieve unity. Indians worship trees, rivers and mountains and they believe that natural elements have their own consciousness and therefore they should always protect nature (Chekima et al., 2016; Paco et al., 2013). Having been influenced by man-nature orientation values, people believe that nature has its own ways and that people should behave in accordance with the way of nature (Afridi et al., 2021; Sharma and Jha, 2017). In Western societies, this is similar to eco-centric orientation (Özekici, 2022; Van Liere and Dunlap, 1980). An eco-centric orientation places emphasis on *"mankind must live in harmony,"* as well as *"maintain a balance with nature"* (Jurowski et al., 1995).

The purchase behaviour of an individual is guided by a set of factors but environment-related behaviour being altruistic in nature has a definite impact. Man-nature orientation (MNO) refers to *"the ability of an individual to live in harmony with nature"* (Kluckhohn and Strodtbeck, 1961). An individual who is low in man-nature orientation values believes in being dominant over nature (Jandt, 2004) whereas an individual who is high on man-nature

orientation believes in adapting to the needs of nature to maintain harmony. Therefore, those who are high in MNO are more likely to develop a positive attitude towards environment-related behaviour. Extant literature based on the theoretical foundation of the Value-Belief-Norm (VBN) theory found a positive relationship between MNO and environment-related behaviour. For example, Liang and Chaipoopirutana (2014) established a positive impact of MNO on attitude and purchase intention towards green electronic products. Minton et al. (2015) found a positive role of MNO in the relationship between religion and sustainable consumption behaviour and established that Buddhists are more likely to work towards sustainability. Sreen et al. (2018) found a positive role of MNO on the green purchase attitude that further leads to green purchase intention. Afridi et al. (2023) explored the moderating role of man-nature orientation in influencing the sustainable consumer behaviour. Thus, there is a positive impact of the value-orientation aspect on environment-related behaviour as documented by various research scholars in the past (Stern and Dietz, 1994; Schultz and Zelezny, 1998). Through the present work, we aim to explore the role of MNO in guiding the sustainable consumer behaviour in an Indian cultural context

3.8   Connectedness to Nature

As written by the famous environmentalist Leopold (1949, *p. 204)* that *"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect".* In the digitised era that we are living in, there is limited interaction that we do with nature around us as we spend our time indoors, especially during the pandemic (Atik et al., 2023; Wang et al., 2023; Pearce et al., 2022; Soga and Gaston, 2016; Beery et al., 2015). Indians spend around 85 per cent of their time indoors (Jaiswal and Bihari, 2020). Therefore, recently there are calls from eco-psychologists to develop connectedness with nature by fostering the interaction of individuals with the natural world. This sense of connectedness with nature will help them exhibit behaviour change and green consumerism by supporting environmental initiatives.

There are mainly two theoretical frameworks that are widely considered to describe the construct of CN. The Biophilia Hypothesis considers an emotional approach and describes *"humanity's innate affinity for and interest in forging connections with the natural world (p. 1)."* The conceptualisation described by Schultz takes a cognitive route and describes CN as

"the understanding that an individual has of her place in nature, that s/he places on nature and his/her actions that impact the natural environment (p. 67)". As per Schultz (2002), there are three psychological and three structural components of CN namely *"cognitive, affective, and behavioural"* and *"connectedness, caring, and commitment"* respectively.

There exist number of studies exploring the role of connectedness to nature on environment-related behaviour (Atik et al., 2023; Wang et al., 2023; Pearce et al., 2022). Generally, it is agreed in the literature that there exists a positive role of CN on environment-related behaviour. For example, Schultz (2001) established that individuals connected to nature are more likely to exhibit more care for nature and thus environment-related behaviour as they tend to include nature in their self-concept. Later, Mayer and Frantz (2004) proposed that CN can have a weak impact on the environment-related behaviour of an individual as due to the modernisation of society there is less interaction of individuals with the natural world. Later, it was established by Davis et al. (2009) that those who are connected to nature have high involvement with issues related to nature and therefore they are more inclined towards environment-related behaviour. Klassen (2010) found that those who reside in rural areas have an intact interaction with nature in comparison to those living in urban areas. Later, Otto and Pensini (2007) described the emotional route of CN and found that those who are connected to nature can have a more intrinsic motivation to protect nature as they view nature as an extension of themselves or part of themselves. Other studies also found a positive role of connectedness to nature on environment-related behaviour (Atik et al., 2023; Wang et al., 2023; Pearce et al., 2022; Jaiswal, 2020; Jaiswal and Bihari, 2020; Whitburn et al., 2019; Mackay and Schmitt, 2019). Through the present work, we aim to explore the role of CN on sustainable consumer behaviour.

3.9   Perceived Environmental Responsibility

Environmental responsibility is the sense or desire that an individual has to preserve, nurture and safeguard the environment. It is believed that environmental awareness has an impact on the sense of responsibility that an individual has towards the environment (Culiberg et al., 2022; Kwon et al., 2020; Ghazali et al., 2019; Steg and Nordlund, 2018; Kumar and Ghodeswar, 2015). With the enormous efforts by the government and policymakers, the awareness of the rising environmental issues and their consequences is rising among

individuals and they are now willing to make efforts to protect the environment as part of their responsibility (e.g., Wu et al., 2020; Liobikienė and Bernatonienė, 2017). There is a growing sense of awareness and consciousness among individuals that they need to monitor their consumption patterns in order to safeguard the environment (Bigliardi and Filippelli, 2022). They have developed a strong sense of obligation to protect the nature. They are now aware that due to their consumption pattern, the environment is witnessing huge problems and only they can protect nature by monitoring their consumption pattern (Perri et al., 2020; McCarthy et al., 2015). As a result, consumers as a part of their environmental responsibility are exhibiting an inclination to buy green/sustainable products (Wang and Wu, 2016). Likewise, a sense of responsibility towards the environment can lead to high self-efficacy in the efforts to protect the environment (Paco et al., 2019; Trivedi et al., 2018). In altruist settings in environment-related behaviour, there is a high motivation among individuals to work for the benefit of others than for themselves and therefore they have a higher willingness to support the initiatives meant for environmental protection. There would be a high willingness to pay for green products when the sense of environmental responsibility is high (de Medeiros et al., 2016). Although there is more awareness among individuals of climate change and environment-related issues, only a relatively low number of individuals are taking up the responsibility to make efforts for environmental protection. This shows that merely activating a sense of responsibility is not enough; there are many other factors that also work in conjunction to promote environmental-related behaviour (Cleveland et al., 2012). Individuals generally have the tendency to make rational choices that involve careful consideration of the cost and benefits involved in their buying decisions. In the case of sustainable offerings, it requires a more altruistic approach that involves greater sacrifice at the cost of the benefit of oneself (Ruiz, 2023; Calculli et al., 2021; White and Simpson, 2013). Sustainable products cost higher in terms of price as compared to traditional ones (Griskevicius et al., 2010). Those who wish to protect the environment as part of their responsibility are more willing to make sacrifices for the long-term benefit of the environment and humans (Allen and Ferrand, 1999). An ascription of responsibility is required as environment-related behaviour tends to get abstract for individuals who do not feel the need to do everything to safeguard the interest of nature (Moisander, 2007).

In the extant literature, several studies have explored those who perceive environmental responsibility are more likely exhibit environment-related behaviour (Culiberg et al., 2022;

Kwon et al., 2020; Ghazali et al., 2019; Nyborg et al., 2006; Klockner, 2013; Attaran and Celik, 2015). There exists a positive role of a sense of responsibility and environmental responsibility. Lee (2009) argued that despite having high awareness and knowledge of environmental issues the perceived sense of responsibility is lower among individuals towards environmental protection. There is a tendency among citizens to believe that it is the responsibility of the government to work towards environmental issues. They expect that government must come up with policy support and initiatives for environmental well-being. Thus, there exist inconsistent results regarding the role of responsibility in motivating an individual towards sustainability and therefore more insights are needed to understand what drives the sense of responsibility to work towards sustainability. There is a need to generate more insights on imbuing environmental responsibility among individuals (Paco et al., 2016). Through the present work, we aim to explore the role of PER on sustainable consumer behaviour.

3.10 Anthropomorphism

Anthropos means 'human' and morphe means 'structure or form'. The term *'anthropomorphism'* was first used to articulate the common themes between religious creatures and their believers by the famous anthropologist *'Xenophones'*. The basic definition of anthropomorphism is the *"tendency to imbue the real or imagined behaviour of non-human agents with human-like characteristics, motivations, intentions, or emotions" (*Epley, Waytz and Cacioppo 2007*, p. 864).* Thus, anthropomorphism is one of the ways through which human characteristics and behaviour are ascribed to non-human agents with the goal of inducing anthropomorphic thinking among people i.e., perceiving a non-human entity like a brand, or a product as having human-like features. Besides, another aim is to ascribe a mental state or brain like a human (Epley et al., 2007).

There is a strong tendency among humans to anthropomorphise everything around them and this has prompted researchers to understand the phenomenon and provide its systematic analysis (Caporael and Heyes, 1997). Existing research provided insights into the underlying mechanism that leads to anthropomorphism (Wu et al., 2023; Yang et al., 2023; Pensini et al., 2022; Williams at al., 2021; Zhu et al., 2019). For example, anthropologist Gurthie (1993) laid the theoretical foundation by explaining the process of anthropomorphism as automatic

where the human brain has a natural tendency to attribute humanness to all natural phenomena and entities. This is also because of the need for people to have relationships in their everyday life therefore anthropomorphising products or services or anything inanimate objects would help to fill the void by having a human relationship. With the aim to gain knowledge about the world and oneself, people tend to anthropomorphise in order to account for uncertain events and less known things. When people are cognitively busy, their propensity to anthropomorphise nonhuman entities is high to reduce mental constraints. Besides, they also found that in when people feel socially isolated, they tend to anthropomorphise to build relationships. Later, a psychological framework was built through the seminal work by Epley et al. (2007). They explained the phenomenon of anthropomorphism by proposing three factors to explain the process of why, how and when people humanise any non-human object through inductive reasoning. The first factor which is cognitive in nature deals with the activation of anthropocentric knowledge for making inferences about non-humans when they feel non-human entity share traits with humans which activates their human schema. The second and third factor is motivational in nature namely social motivation and effectance motivation. When people feel socially deprived their innate need for social connection and belongingness is activated increasing thereby increasing the likelihood to anthropomorphise. Waytz et al. (2010) later further built on Epley's work and identified effectance motivation as one of the important factors for the phenomenon of anthropomorphism. He identified how different individuals differ in their propensity to anthropomorphise nature.

There are two different ways of getting engaged in anthropomorphic thinking namely interpretative and imaginative (Fisher, 1991). Interpretative is assigning emotional and behavioural characteristics namely intention, belief, and attitude to the inanimate object (e.g., Alexa) whereas imaginative are the thoughts that lead to attributing human-like attributes to non-human entities (e.g., God). Guthrie (1993) also identified three forms of anthropomorphism namely *"partial, literal* and *accidental"*. Partial is when an inanimate object is believed to have a human-like trait but does not perceive the whole object as a human. On the contrary, the literal form considers the whole entity as a human due to some prior belief or misconception. Lastly, accidental is when an individual views some elements of a human in an inanimate entity coincidentally (people's face in a cloud or rock).

In the extant literature, the phenomenon of anthropomorphism has been explored in multiple fields like animals (Cheney, 1992), religion (Gilmore, 1919) and gadgets (Epley et al., 2008). The phenomenon of anthropomorphism was first traced in history when animals and Gods were often treated as humans. The phenomenon of anthropomorphism can be traced in history some thousands of years back (Marshack, 1990), and the first evidence was discovered in an about 30,000-year-old piece of artwork in Europe (Mithen and Boyer, 1996) in a human-like structure of lion picturised with the human head (Dalton, 2003). Indian Panchatantra anthropomorphises animals (e.g., worship cow as a mother). Also, different religions consider the human form as a representation of deities. In literature and art too, the anthropomorphism phenomenon is evident (e.g., Alice in Wonderland, Jungle Book, Lion King, Disney characters like Mickey Mouse, Donald Duck, etc). Anthropomorphism is prevailing in all cultures and impacts different aspects of human life from infancy to later stages of life (Severson and Lemm, 2016; Inagaki and Sugiyama, 1988; Hatano and Inagaki, 1994).

Various entities which are often anthropomorphised include animals, deities, geometric shapes, nature or natural forces, moving plants, electronic devices, computer-animated blobs, social causes etc. People not only tend to attribute human-like characteristics to inanimate objects by mapping the morphological similarities but also draw inferences from them, especially the emotional facial expressions (Leyens et al., 2003). This is also because human faces are more easily processed and retained in memory (Landwehr, McGill and Herrmann, 2011; Mondloch et al., 1999). For example, buttons, knobs, windows, headlights of the car, and the shape of the bottle may appear similar to the human eye to an individual (Windhager et al., 2008). There are different products that are often anthropomorphised to get increased attention from the audience and like towards them e.g., different sizes of bottles placed in an order to resemble a family group or analogue watch that is set at 10: 10 that resembles a human smile (Aggarwal and McGill, 2007). In the ancient days too, in the famous Indian television epic named 'Mahabharat', time (Samay; Hindi) is humanised as a narrator of the show with a deep resonant male voice (Labroo et al., 2008).

Anthropomorphism gained interest among practitioners and researchers in the domains namely marketing, social psychology and consumer behaviour only in the last few decades (Waytz et al., 2010; Chandler and Schwarz, 2010; Aggarwal and McGill 2007). The first to

describe the phenomenon of anthropomorphism in the area of marketing, especially in the field of consumer behaviour, is the study by Aggarwal and McGill (2007). There was a radical shift in the adoption of the concept of anthropomorphism in the area of marketing wherein interest was generated among scholars to understand how, when and when the humanisation of non-human brands or products can affect human judgement and behaviour. Literature in consumer research suggests that people have a strong tendency to mentalize brands, products or any other object as human (Mithen and Boyer, 1996). Hence cognitive ergonomics account of how consumers behave towards anthropomorphic entities is critical for drawing marketing implications. Consumer behaviour research aims to understand the phenomenon of anthropomorphism and has explored various entities like different products namely cookies, coffee-makers, switches, light bulbs, etc. Besides other entities like social causes (Ahn et al., 2014; Delbaere et al., 2011), time (May and Monga, 2014), brands (Aggarwal and McGill, 2007), nature (Tam et al., 2013) and disease (Kim and McGill, 2011) have also been explored. Entities that are shaped like people are more likely to be viewed as human by people. Besides, humanness can also be attributed to facial features, voice, imitation and communication skills (Dennett, 1996). For example, artificial technology like Alexa and Siri are often anthropomorphised. Prior work has explored different forms of anthropomorphism using linguistic or visual appeals to bring humanness to a non-human entity to understand how anthropomorphism affects the attitude, behaviour and perception of an individual (Culley and Madhavan, 2013; Delbaere et al., 2011; Kim and McGill, 2011; Chandler and Schwarz, 2010; Aggarwal and McGill, 2007).

Anthropomorphism is also being studied in various other disciplines namely engineering, human-computer interaction, industrial design, robotics, computer science and other related interfaces. A study by Reeves and Nasa (1996) found that interactions with computers, TV and other new communication technologies are similar to their interactions with real people and the same as real social relationships. They also reported that people are polite to computers with female voices than to male voices. A study by Bates (1994) found that computer agents like Woogles designed with human features like cute facial expressions to play games with one another are likely to affect the playing intention of users and also influence their mood. Cassell (2000) reported that many efforts are needed to design virtual agents with anthropomorphic features. For example, Rea is a real estate agent that converses with users in a way a human does. Baylor (2009) reported that agents which are anthropomorphised are more capable of generating behavioural change outcomes. Gong

(2008) found that anthropomorphic computer representation induces the perception of the trustworthiness of agents.

Anthropomorphism can aid to lighten the knowledge of Human-Robot Interaction (Bartneck et al., 2009; Kiesler and Goetz, 2002) thereby resolving uncertainty, and depicting meaning and efficacy. Companies like Audi, American Express, ASICS, iPhone, and Coca-Cola have used these strategic cues in their promotional campaigns. Recently, Amazon launched Echo, a female interactive speaker in the cylindrical form given the human name 'Alexa' that has a quirky personality and uses familiar human intonation. Besides, Cortona and Siri are also the digital artificial characters blurring the line between human and artificial technology in the recent era. They have the capability of being alive either through auditory features, visual features or a combination of both and are found to be beneficial. In the service industry too, the use of anthropomorphic service robots for customer assistance has been widely used. For example, several airports like *"San Jose International Airport* in the Silicon Valley ", *"Seoul Incheon International Airport"* in South Korea, *"Tokyo Narita Airport"* in Japan and Oakland Airport are using humanlike robots to provide assistance to passengers. Major hotel chains like Hilton, Marriott, and IHG have also started employing robots to serve customers at their hotels. In the healthcare industry, too, different software programs with human-like features are used that have the power to establish an emotional and social bond with the users. For example, in the healthcare literature focusing on the phenomenon of anthropomorphism, it was found that anthropomorphic agents motivate elderly to do more exercise (Bickmore et al., 2005), assist social interaction among children with autism (Tapus et al., 2012) and ease observance of medication for patients with schizophrenia (Bickmore et al., 2010).

Aggarwal and McGill (2007) studied the influence of the anthropomorphic representation of a car using the schema congruity as a theoretical base and suggest that people interpret an upturned grille on a car not only as a mouth but as a smile (Landwehr, McGill, and Hermann, 2011). Windhager et al. (2008) found that people relate anthropomorphic cars similar to human faces such that the headlights appear as eyes or the grille appear as the nose. Another study by Windhager et al. (2010) noted using eye-tracking patterns that people's eye-tracking movements were similar when gazing at an anthropomorphic car to the role of eyes during face perception. Meisler, Leder, and Herrmann (2011) found that people respond more positively to a baby-faced car front than a non-baby-faced car front.

We often came across the front side or the face of vehicles, radios, furniture, toys, slot machines etc. appearing to be like a human face. A recent example is the face of the *'Volkswagen Beetle'* in which the headlight appears to be like the eyelashes of an enthusiastic female face whereas Jeep Cherokee 's headlights and grilles look similar to the eyelashes of an assertive, masculine face. Similarly, Google cars have a front side that appears like a human face whose sensor looks like a pert nose, headlights look like wide-open eyes and bumpers look like a smiley mouth. Besides vehicles, Warby Parker's glass frames have been assigned human names like Harper, and Hugo and their characteristics are assigned to be like humans (e.g., "*Hugo has immediate charm*").

The phenomenon of anthropomorphism also affects the affective, cognitive and motivational state of an individual. When we assign human-like attributes to digital agents or cars, we trust them more (de Visser et al., 2017; Waytz, Heafner, and Epley, 2014). If the instructional entity is anthropomorphised, we will likely learn more from them (de Visser et al. 2017). The tendency to anthropomorphise nature can lead to a positive effect on an individual's evaluation of a product and brand (Delbaere et al., 2011). When dealing with an unfamiliar entity, the anthropomorphic representation helps in gaining positive response towards that entity (van Esch et al., 2019). The tendency to anthropomorphise also leads to emotional connectedness to the entity (Delbaere et al., 2011; Wang et al., 2007). When a brand is anthropomorphised, it leads to generating better identification of the brand with consumers (Tuškej and Podnar, 2018). It also helps in establishing a lasting relationship with the brand and the chances of replacing a brand decrease (Chandler and Schwarz, 2010). The anthropomorphised brand or entity is believed to be more mindful and intentional like humans which facilitates the development of consumer brand relationships (Waytz et al., 2010). This is based on the theory of anthropomorphism that proposes that the tendency to anthropomorphise non-human entities leads to the activation of human schemas that in turn leads to the application of human knowledge about the society to the anthropomorphised non-human entity. Thus, the anthropomorphised non-human entity is perceived to be similar in nature to humans (MacInnis and Folkes, 2017). The propensity to anthropomorphise also leads to treating the humanised non-human entity with empathy, care and respect (Chandler and Schwarz, 2010)

3.11 Propensity to Anthropomorphise Nature

We often visualise the human face in clouds, feel like the winds are whispering something and interpret human form or structure on rocks and trees. The answer to this lies in the prevalence of anthropomorphism in the environmental discourse. The various natural phenomena occurring around us are often presented as a story or myth wherein the various natural objects like mountains, trees, rivers, sea, etc. are presented as human beings (Norenzayan, Hansen, and Cady, 2008). We often come across various stories that people build when a natural disaster occurs due to supernatural power and spiritual value. With the motivation to shorten the distance, people generally follow the propensity to humanise nature as it is easier to decipher human-like qualities and behaviour (Wu et al., 2023; Yang et al., 2023; Pensini et al., 2022; Williams at al., 2021; Zhu et al., 2019; Tam et al., 2013; Batson, 2011). There are various examples of how scholars, policymakers and practitioners have used anthropomorphic representation to describe nature. For example, AI Gore narrated in his Nobel work that *"As a result, the earth has a fever"* thus comparing the present condition of the environment with a human ailment. In the 1990s, a public service announcement was made by the government of Hong Kong wherein Earth was addressed as "Mr Earth". Besides, "Mother Nature" is often used for nature in environment-related disclosures for women-nature associations. For example, United Nations General Assembly launched a campaign "International Mother Day" for the promotion of environmental protection (Chang, Huang and Liu, 2018). *"Earth is crying-dry her tears"* is the official *"WWF Earth Hour Song 2013"* of Austria. Thus, there exist few studies in the extant literature that support the contention that generally people anthropomorphise nature with the female gender than the male gender (Tam, 2014). Thus, these cases exemplify the tendency to anthropomorphise nature (Yang et al., 2023; Wu et al., 2023; Pensini et al., 2022; Williams at al., 2021; Zhu et al., 2019; Kwan and Fiske, 2008; Epley, Waytz, and Cacioppo 2007; Guthrie, 1993).

There is a difference in the propensity to anthropomorphise natural entities since individuals differ in their characteristics and culture. The past decade has seen a burgeoning fascination for an emerging concept to describe human-nature relationships as anthropomorphism of nature. The topic has become so prominent because of the need to build closer and stronger emotional relationships with nature has become so crucial. Practitioners have also recognised the importance of building effective human-nature relationships. For example, in the past

various researchers have documented the usefulness of establishing a human-nature relationship by humanizing natural entities like seas, trees, rivers, and mountains in the environmental disclosure (Yang et al., 2023; Wu et al., 2023; Pensini et al., 2022; Williams at al., 2021; Zhu et al., 2019; Ahn et al., 2014).

There is greater attention given by researchers to understanding whether the tendency to anthropomorphise nature impacts conservation behaviour. There exists a number of studies exploring the relationship between the tendency to anthropomorphise nature and sustainable consumer behaviour. Anthropomorphism of nature is believed to be a complex phenomenon. The answer to how and why people conceive natural entities as humans with intention and thereby justify/rationalise past natural disasters and try to foresee future natural accidents can be understood through the phenomenon of anthropomorphism (Epley et al., 2007; Gray and Wegner, 2010). The tendency to anthropomorphise nature leads to treating nature with respect and fairness by applying the norms of fairness used in interaction with humans (Waytz et al., 2010). There exist few qualitative studies aiming to understand the role of anthropomorphism of nature on the environment-related behaviour of children. There exist few studies to understand how cultural differences impact the tendency to anthropomorphise nature (e.g., Atran et al., 2002). There exist few correlational works that explored how the tendency to anthropomorphise nature varies across individuals and their environment-related behaviour (e.g., Tam, 2013b). Few studies conducted several experiments by situationally inducing the anthropomorphic representation of nature to analyse its impact on conservation behaviour or environmentally sustainable behaviour (Tam et al., 2013). While this pioneering work provides interesting insight into the theoretical mechanism of the role of anthropomorphism of nature on environment-related behaviour. There is a belief that nature feels emotions and cognitions similar to humans and therefore those all who humanise nature have a tendency to feel concern for nature and show environment-related behaviour (Clayton et al., 2011). The second body of literature on exploring the phenomenon of anthropomorphism of sustainability context aims to understand the underlying mechanism guiding the behaviour through exploring various constructs namely connectedness to nature, anticipated guilt, pride, and sympathy driving the impact of anthropomorphism of nature on the environment-related behaviour (Seth and Ketron, 2020; Tam et al., 2014; Ahn et al., 2014; Tam et al., 2013). However, more research is required to further gain insights into the mechanism underlying the phenomenon of anthropomorphism of nature. Besides, there exist

a few conflicting findings that suggest that the phenomenon of anthropomorphism is contextually sensitive and more findings are needed to explore the underlying mechanism. Extended discussions on the relationship between anthropomorphism and SCB are still needed to build the theoretical underpinnings as pointed out by Ketron and Naletelich (2019) in their study. As such, through the present work, we seek to address one contextual factor namely the propensity to anthropomorphise nature to encourage compliance with sustainability cues along with other mediating and moderating variables namely the love of nature and personal values respectively.

Chapter IV

Research Gaps

The literature review in the previous chapters discussed important facets of the phenomenon *"sustainable consumer behaviour"* as well as the important constructs that can influence sustainable consumer behaviour as potential antecedents, mediators and moderators. Based on the extensive literature review, this chapter identified potential research gaps addressed in the present work.

4.1 Potential Research Gaps

We identified important research questions and prepared conceptual frameworks based on the research gaps.

1. Environmentally sustainable consumer behaviour is of immense importance for the achievement of SDGs. Sustainable consumer behaviour is a complex phenomenon that can be understood from varied perspectives. Recently, increased attention is being paid by researchers, sociologists, practitioners and psychologists. However, better insights are required in this area in various contexts from diverse perspectives for the achievement of SDGs.

2. India as an emerging economy has a high level of unequal income distribution. There is a widened gap in the income group in India and the rich exhibit their unsustainable consumption behaviour through increased levels of consumption leading to an increased ecological footprint and environmental consequences (Leibbrandt, Finn, and

Woolard, 2012). Therefore, Indians also started paying attention to environmental issues and concerns and making efforts to follow more sustainable offerings and practices (Momberg, Jacobs, and Sonnenberg, 2012). There is a need to understand sustainable consumer behaviour in Indian context through varied perspective.

3. A vast number of cultures and subcultures live in coexistence in a country like India, a heterogeneous nation. These are unique in terms of values, norms, beliefs, etc.; therefore, differences exist in the cultural orientations of the people in India. It also significantly differs in most of the developed countries where the phenomenon of sustainable consumer behaviour has largely focused on. Therefore, understanding the individual tendencies of Indian consumers can help marketers with a better picture of their behavioural intention with regard to sustainability aspects.

4. The recent development in the field of sustainable development has generated interest among organisations to promote green products and influence customers to purchase sustainable products (Sreen et al., 2018). Moreover, Asian countries are densely populated, and consumers have the power to influence the global economy; therefore, firms offering green products are targeting Asian countries (Jaiswal and Kant, 2018). Yet, only a few studies have explored consumers' sustainable behaviour in emerging economies like India (Yadav and Pathak, 2016; Chen and Chai, 2010; Mostafa, 2006; Chan, 2001). The results are far and in between. Therefore, this study aims to address the following research questions in an emerging economy like India.

5. Previous studies have explored important demographic and psychographic characteristics of individuals that can impact their environmentally sustainable behaviour. However, the role of emotions in influencing environmentally sustainable consumer behaviour is underexplored and needs more useful insights in different contexts. Marketers often rely on the use of emotional appeals for the promotion of their offerings with the underlying belief that positive emotions drive the consumption intention of sustainable products because if the consumer feels good, he would make efforts to do good. However, extant literature has widely ignored the role of specific emotions and the mechanism of how it gives rise to sustainable consumer behaviour (Dong et al., 2020). Specific emotions like love, pride, compassion, and hope largely influence consumer behaviour. In the case of environmentally sustainable behaviour, the role of specific emotions in influencing consumer behaviour needs better insights. Existing studies in the context of sustainable consumer behaviour need more insights into the role of specific emotions in driving environmentally sustainable behaviour.

6. There is an increased recognition of the importance of emotion in enhancing the explanatory power of decision and behavioural intention (Mellers et al., 1999). However, little consideration is given in understanding the role of emotional factor in decision-making in comparison to cognitive factors (Loewenstein and Lerner, 2003). As argued by Morris et al. (2002), studies relying on the cognitive process in consumer behaviour research mostly measure attitude solely and therefore they lack predictive power. It has been argued by researchers to also measure feelings and emotions associated while making decisions. For example, Bagozzi et al. (1999) emphasised the role of emotions in influencing information processing, response to stimuli like persuasive appeals, goal-oriented behaviour etc. There exist few studies in the literature supporting the role of emotion in environment-related behaviour (Carrus et al., 2008; Kals et al., 1999). However, more research is required to understand the role of emotion in guiding the environment-related behaviour of an individual. Malhotra (2005) pointed out that *"more research is needed to understand the nature of the cognitive and affective constructs and how they interact to influence overall attitude, intention, and behaviour"* (*p. 481*). Therefore, the present work aims to explore the role of specific emotion namely the love of nature in guiding sustainable consumer behaviour. We aim to explore an emotion-based theoretical model based on the Theory of Planned behaviour and augmented the same with Sternberg's theory of love to explore the role of emotion along with cognition to better predict the intention and behaviour.

7. The role of a specific emotion, namely the love of nature in motivating an individual to behave in an environmentally sustainable way is a complex phenomenon and there are calls from researchers to explore the underlying mechanism and explore its antecedents and consequences. Love as a specific emotion represents an intimate connection between an object and an individual thus strengthening the connection between the two. Therefore, it is important to examine the role of love of nature as an intrinsic motivation in guiding the environment-related behaviour of an individual. Love of nature is considered an internal motivation for forging the human-nature relationship and reflecting the strength of the positive emotional connection of an individual with nature (Kals et al.,1999). Based on the relation paradigm, in the marketing context, the role of brand love in driving the consumer-brand relationship is well-established theoretically. The academic literature is paying attention to exploring the role of love of nature in driving the human-nature relationship. There

exist few studies in the developed country context of United States origin. Researchers based on interpersonal relationships theory have proposed that emotions are influenced by cultural differences (Beall and Sternberg, 1995). The culture of a particular country context might impact the conceptualisation and dimension of a specific emotion like the love of nature. Therefore, more studies are required to guide the academic community and practitioners about the role of specific emotions in a specific country context.

8. The role of cultural values in guiding the environment-related behaviour of an individual needed more insights as culture is one of the most important determinants of consumer behaviour and is widely used in the developed market to explain sustainable consumer behaviour. To the best of our knowledge, there exists little literature on emerging market contexts exploring the path from cultural values to the emotional path and TPB constructs and then from TPB construct and emotion to behavioural intention to exhibit sustainable consumer behaviour. Thus, the present work aims to cover these knowledge gaps by creating the path from the cultural dimension to the emotional route and TPB construct to the behavioural intention. For the present work, we incorporated the value orientation model by Kluchhohn and Strodtbeck (1961). We applied Man-Nature Orientation from the K-S Framework. In the extant literature, the researchers do not find much insight into the role of man-nature orientation in the sustainability aspects specifically in the Indian context. How and when man-nature orientation impacts sustainable consumer behaviour might showcase a better viewpoint to the practitioners and academic community to better understand Indian consumers' sustainable behaviour.

9. The extant literature provides important insights into how the relationship of individuals guides environment-related behaviour. It established the role of emotional connectedness with nature in guiding the human-nature relationship that in turn impacts sustainability aspects (Ives et al., 2018). The role of CN on various environment-related measures like conservation behaviour, green purchase behaviour, environmental beliefs, engagement in pro-environment behaviour, nature well-being and environmental identity has been studied (Olivos and Clayton, 2017; Martin and Czellar, 2016; Brügger, Kaiser and Roczen, 2011). However, the role of CN in influencing sustainable consumer behaviour across the product life cycle and the mechanism through the emotional and cognitive route is yet not explored in the body

of knowledge. Therefore, the present work aims to explore the role of CN on the sustainable consumption intention of an individual.

10. Existing studies linking CN with environment-related behaviour are largely done in the developed Western country context. There is a need to fill the knowledge gaps by exploring more useful insights on the role of CN and exploring if CN is contextually sensitive. It is argued that different populations or cultural differences would create a differential impact of CN on sustainability aspects due to diverse responses (Restall and Conrad, 2015). Particularly, in Indian culture, exploring the role of the emotional connectedness of nature in guiding the human-nature relationship is an interesting phenomenon to explore because Indians have inherited through their traditions and beliefs the environmental values and given importance to nurturing and protecting nature. Indian culture guides humans to live in harmony and peace with nature and it is evident from their various arts, crafts, heritage and daily lives. Thus, filling the research gaps by investigating the role of emotional connectedness with nature in promoting protective links towards nature and ascribing a sense of responsibility towards environmental protection. Indian culture believes in being in harmony with nature, and it is being reflected and nurtured in a variety of rites and rituals, arts, crafts, and daily lives of Indian people. Human-nature connectedness can be used to promote protective links and to generate a sense of responsibility towards nature.

11. There are calls from researchers to understand the role of perceived environmental responsibility in guiding environment-related behaviour (Yue et al., 2020; Eden, 1993). The sense of responsibility towards environmental protection motivates an individual to make efforts and promote environment-related behaviour (McDonald et al., 2015). The structural relationship between the constructs, namely CN, TPB constructs, LN and SCB and their interactions, is yet to be explored. Through our present study, we aim to explore how CN and MNO among individuals can lead to PER which in turn can promote SCB.

12. Although the importance of the phenomenon of *'anthropomorphism'* is well-established and its role in influencing consumer behaviour is well documented, the phenomenon of '*anthropomorphism of nature'* needs more insights. The positive role of anthropomorphism of nature in influencing environment-related behaviour may exhibit complex nature-making phenomena contextually sensitive (e.g., Shrout and Bolger, 2002) thus it is important to identify different variables impacting the underlying mechanism. Thus, the present work aims to shed more light on the

moderating role of anthropomorphism in influencing sustainable consumer behaviour.

13. According to the Indian philosophy (Advaita), the same *"atman"* (soul) is present in everything including Nature (Ranganathananda, 1995, *p. 83*). Indians treat nature as human and therefore insights into the phenomenon in the Indian context can be of use to practitioners to address environmental-related issues. A meagre number of studies exist that focus on the phenomenon of anthropomorphism of nature in the Indian context. More pieces of evidence are required to understand the cognitive and affective dimensions of anthropomorphism on sustainable consumer behaviour.

14. In the extant literature, several studies exist exploring several important concepts for understanding sustainable consumer behaviour in the case of apparel. However, there exist intention-behaviour gaps regarding sustainable consumption. Studies dealing in the area of sustainable apparel consumption have largely relied on qualitative techniques like in-depth interviews, focus groups, etc. and explored the facilitators and inhibitors of sustainable apparel consumption. However, a more holistic framework exploring the behavioural intention and subsequent behaviour of an individual is needed through the integration of previous findings. In line with the previous studies, we draw on the Theory of Planned Behaviour and augmented the role of emotion namely love of nature as well as other novel constructs from human-nature relationship dimensions to explore the phenomenon. Thus, we contribute to the body of literature on sustainable apparel by providing insights into unexplored, potential antecedents of sustainable apparel consumption intention. To the best of our knowledge, the effects of love of nature, environmental responsibility, and other human-nature relationships like man-nature orientation, and connectedness to nature are not studied in relation to sustainable apparel consumption context, therefore conclusion generated from this study can provide new insights to academia and practitioners in the field of sustainable apparel.

15. Sustainable consumer behaviour in general and sustainable apparel behaviour in particular show variation in accordance with the country context due to the cultural differences and also the level of development of each country context also differs. For example, consumers in America when increasingly exposed to the product show higher purchase intention whereas consumers in China are more persuaded by monetary benefits and temporal cost (Ko and Jin, 2017). Besides, there is also a wider geographical gap in terms of findings as most of the existing studies have narrowly

focused on western societies like United States and United Kingdom (Albloushy and Hiller Connell, 2019) and research in the emerging market context needs more insights (Kim and Seock, 2019) as the existing studies are few and far between (Dhir et al., 2021). Therefore, in order to fill these knowledge gaps, it is of importance to explore the behaviour toward sustainable apparel in the emerging market context of India, an emerging Asian economy.

4.2   Research Questions

The present work aims to answer the following important research questions in order to understand sustainable consumer behaviour in an emerging market context namely India:

- RQ1: What are the important cognitive, emotional and attitudinal factors that affect the BI towards SP?

- RQ2: Does LN as an affect significantly affect the BI towards SP?

- RQ3: Do CN and MNO impact cognitive, emotional and attitudinal elements of behavioural intention towards SP?

- RQ4: Is there a mediating effect of '*LN*', '*ATT*', '*SN*' and '*PER*' on the relationship between MNO and BI towards SP as well as on the relationship between CN and BI towards SP?

- RQ5: Is there a moderating effect of '*PAN*' on the relationship between MNO and ATT, SN, PER, LN as well as on the relationship between CN and ATT, SN, PER, LN.

- RQ6: Does the level of involvement with apparel moderate the role of ATT, SN, PER and LN on the BI towards sustainable apparel context?

- RQ7: Does the cultural difference in an emerging country context of India significantly affect the role of human-nature relationship constructs and emotion like LN on the BI towards SP?

The answers to all these important research questions can help the academia, practitioners and policy-makers in exploring the role of love of nature in guiding the behavioural intention of an individual towards sustainable consumption, the ways of building emotional ties between nature and human, the interconnection between man-nature orientation and connectedness to nature in forging the attitudinal, normative, cognitive and affective ties to persuade an individual towards sustainable consumption and finally the power of anthropomorphism as a cues in guiding the human-nature relationship and sustainable behavioural intention.

4.3   Research Objective

Based on the research questions, the following are the important research objectives we aim to achieve

RO1. To augment the theory of planned behaviour (TPB) to the context of love of nature to understand consumer intentions and behaviours towards sustainable products.

RO2. To respond to call from recent literature by exploring the antecedents of love of nature. This study aims to investigate the role of man-nature orientation and connectedness to nature as a potential antecedent to love of nature in influencing sustainable consumer behaviour.

RO3. To explore the role of anthropomorphism as a moderating variable in governing the relationship between MNO, CN with BI towards SP.

RO4. To study the role of product involvement in influencing BI in the context of apparels.

RO5. To understand the role of human-nature relationship in an emerging market context-India

Chapter V

Conceptual Background and Hypothesis Development

5.1   Sustainable Consumer Behaviour and Theory of Planned Behaviour

Sustainable Consumer Behaviour is a broad umbrella term that consists of various aspects like working towards environmental protection, improving quality of life and well-being, ensuring resource effectiveness and efficiency during usage and taking care of the needs of future generations (Goyal et al., 2022; Bridges and Wilhelm, 2008). The three broad categories of classification of studies dealing in the area of sustainable consumer behaviour are *"green consumption, socially responsible behaviour and ethical practices"* (Sinha et al., 2022; Black and Cherrier, 2010). For the present work, we followed Dong et al (2020) to define sustainable consumer behaviour as the behaviour with regard to protecting the environment and using the product in a way that there is minimum harm to the environment across each stage of the product life cycle. It involves activities like the preference for green products over other alternatives, maximizing product usage, reusing and recycling. In the previous studies dealing with the area of environmentally sustainable behaviour, mainly one dimension is focused namely sustainable product purchase behaviour (e.g., Singh and Verma, 2017) or reduce or reuse behaviour (Garvey and Bolton, 2017) or only recycling behaviour (Wang et al., 2017) but for our present work we are focusing on understanding all the three aspects for understanding environmentally sustainable behaviour following recent studies (Dong et al., 2020; Ketron and Naletelich, 2019).

Previous studies have used TPB theory to gain insights on role of attitude, subjective norm and control factors in understanding SCB (Kasim et al., 2021; Sheron and Kumar, 2020; Judge et al., 2019; Johnstone and Lindh, 2018; Giampietri et al., 2018). Attitude is a crucial guiding aspect that shapes an individual's intention and behaviour and inclines them towards environment-related behaviour (Ahmed et al., 2021; Esfandiar et al., 2020). In the environmental context, there exist a positive relationship between environmental behaviour and attitude as documented across various cultures (Trivedi et al., 2018; Yazdanpanah and Forouzani, 2015; Mostafa, 2007). Those who exhibit higher positive attitude towards sustainable products are more likely to exhibit more intention to prefer such products as documented by scholars (Rausch and Kopplin, 2021; Kushwah et al., 2019; Ayub et al., 2018; Ma et al., 2012; Ozcaglar-Toulouse et al., 2006). TPB that also suggests a positive role of ATT on BI towards sustainable products and is also consistent with the previous studies in other contexts (Asadi et al., 2021; Orazi and Chan, 2020; Sparks et al., 2014; Ramayah et al., 2012; Chan and Lau, 2002). Existing studies have also documented that social groups around us such as family and peers influence our consumption behaviour and impact our social values (Jain et al., 2020; Dash, 2020; Budovska et al., 2020; Bai et al., 2019; Tsarenko et al., 2013; Salazar et al., 2013; Lee, 2011; Biel and Thøgersen, 2007; Robinson and Smith, 2002). This group effect can motivate a person to act in an environmentally sustainable manner. The immediate group around us can be a good source of learning through observing others and can also act as a good source of information regarding the sustainability aspects (Dash, 2020; Lee, 2014; Robinson and Smith, 2002). Multiple studies support that subjective norms will exert a positive influence on the behavioural intention towards sustainable products (Jain 2020; Kumar et al., 2017). In previous studies, however, a relatively weak relationship between SN and BI is also identified (Asadi et al., 2021; Minton et al., 2018; Lundblad and Davies 2016; Panzone et al., 2016; Cialdini and Trost, 1998; Trafimow and Finlay, 1996). In the Indian context too, many studies have explored the role of subjective norms on intention towards environment-related behaviour (e.g., Kumar et al., 2017; Paul et al., 2016). Lastly, the control factors are the external or internal facilitating or inhibiting factors that motivate an individual to act in a way to protect the environment and take initiative in environmental practices (Rausch and Kopplin, 2021, Yuriev et al., 2020; Yue et al., 2020; Jain et al., 2020, Akbari et al., 2019). We have accounted for the role of perceived environmental responsibility as an internal facilitating factor of TPB that affects behavioural intention in line with existing studies that argues that those who perceive environmental responsibility are more likely exhibit environment-related behaviour (Yue et al., 2020; Attaran and Celik, 2015;

Klockner, 2013; Nyborg et al., 2006; Eden, 1993). In the extant literature, a significant positive impact of perceived environmental responsibility on behavioural intention towards sustainable products is established (Culiberg et al., 2022; Yue et al., 2020; Kwon et al., 2020; Ünal et al., 2019; Ghazali et al., 2019; Ghazali et al., 2019; Ma et al., 2019; Steg and Nordlund, 2018; Rezvani et al., 2017; Bronfman et al., 2015; Eden, 1993). In line with this, we believe the more the positive evaluation of the product and more the perception of responsibility to work towards environmental protection, more positive the behavioural intention would be with regard to sustainable apparel.

In line with this theory and extant literature, we expect if individuals hold a positive attitude towards something, then they are more likely to develop positive behavioural intention, and if individuals think that other people around them will approve of their behaviour, then they are more likely to exhibit a behaviour due to social pressure (John, 1999; Conner and Armitage, 1998) and lastly the third component namely perceived behavioural control that acts as a driving control factor will also influence behavioural intention of individuals to engage in a specific behaviour. Thus, we propose that that attitude, subjective norms and perceived environmental responsibility will act as a positive predictor of intention

H1: Attitude towards sustainable products (SP) will have a positive influence on behavioural intention towards sustainable products.

H2: Subjective norms towards sustainable products (SP) will have a positive influence on behavioural intention towards sustainable products.

H3: Perceived environmental responsibility will have a positive influence on behavioural intention towards sustainable products.

5.2   Love of Nature (LN) as a Positive Emotion

TPB has been widely used in understanding behavioural outcomes, however, one of the often-raised pitfalls is that it does not account for the emotional aspects that also shape the intention and subsequent behaviour of an individual. The theory solely accounts for the

rational choices that an individual makes which may not be the case always as emotions also drive the decision of an individual. In the case of altruistic settings like sustainable behaviour, emotions can also impact the intention of an individual and therefore we have accounted for the role of love of nature as a positive emotion driving the behaviour of an individual. The extant literature has identified the positive role of the love of nature with regard to environment-related behaviour, the existing work guides the literature by adding the love of nature construct with the Theory of Planned Behaviour (Dong et al., 2020; Dong et al., 2018).We have augmented the role of love of nature along with the TPB constructs namely attitude, subjective norms, and perceived environmental responsibility, and found that along with the TPB constructs, love of nature as a positive emotion has a direct and positive impact on the behavioural intentions towards sustainable apparels.

In the area of marketing and consumer psychology, the concept of love has been widely used especially brand love. Love is a special emotion that generates desire and compassion (Oveis et al., 2010). Neuroscientists also believe that love is not only an emotional state but it can also go beyond that and can represent a motivational state to achieve a specific goal (Aron et al., 2005). Sternberg's theory advocates that individuals are inclined to forge social connections with others (Hutcherson et al., 2008). In the area of consumer-brand relationships, the concept of brand love is well-established and is being studied by various scholars (e.g., Batra et al., 2012). Brand love has a positive role on word-of-mouth, fosters loyalty towards brands and also motivates an individual to pay premium (Albert and Merunka, 2013; Carroll and Ahuvia, 2006).

In the domain of human-nature relationship, the concept of love of nature is understudied and literature support is still required. Therefore, the present work has extended the concept of love to abstract entities like the natural world around us. We have considered all three components of love namely passion, intimacy and commitment and assumed that all three components affect sustainable consumption behaviour of an individual. Recently scholars have studied three components of love of nature yet more theoretical support is needed in different contexts (Dong et al., 2020). Passion for nature that represents the motivational state represents a strong emotional connection with the natural world and inculcates a strong desire for strengthening the relationship with nature by investing resources (Batra et al., 2012). Passion-driven behaviour also helps an individual in establishing an identity with nature (Gheng et al., 2015). Love can impact the consumption behaviour of an individual (Zhang et

al., 2019). Intimacy for nature that represents the affective state represents an interactive experience of humans and nature (Armon and Armon, 2015). Cho et al. (2015) found that intimacy can result in intellectual and sensory positive associations with the loved entity that in turn can affect the consumption behaviour across the product life cycle namely purchase, use and disposal (Dong et al., 2017). Commitment to nature represents the cognitive element that refers to the psychological state and drives the willingness to maintain the relationship through attachment. Commitment towards nature strengthens the relationship with the natural world. Commitment defines the quality of a relationship with nature (Yu et al., 2019). It motivates an individual to behave in a way that is mutually beneficial to each other (Dix et al., 2014). It also affects the consumption behaviour of an individual with regard to the environment (Taat et al., 2018).

Affective elements provide one of the important paths to nurture environment-related behaviour. Existing research provides support for the role of negative as well as positive emotions in driving environmental behaviour (e.g., Zelenski and Desrochers, 2021; Mallett, 2012; van Zomeren et al., 2010). Previous studies suggest that an individual who is emotionally invested with nature has more inclination to protect it (Wilson et al., 2014; Halpenny, 2010; Kals et al., 1999; Kudryavtsev et al., 2012; Hungerford and Volk, 1990; Larson et al., 2017). Ecological affect also positively influences the green purchase intention of an individual as documented (Kanchanapibul et al., 2014; Chan and Lau, 2000). It is generally agreed that an individual who is emotionally invested with nature has more inclination to protect it (Habib et al., 2023; Haj-Salem et al., 2022; Lu et al., 2020; Lu et al., 2020; Odou and Schill, 2020; Kashmiri et al., 2019; Codini et al., 2018; Larson et al., 2017; Lerner et al., 2015; Wilson et al., 2014; Kudryavtsev et al., 2012; Halpenny, 2010; Grant and Wrzesniewski, 2010; Bamberg, Hunecke, and Blo, 2007; Nelissen et al., 2007; Kaiser, 2006; Leone et al., 2005; Perugini and Bagozzi, 2001; Kals et al., 1999; Richard et al., 1996; Hungerford and Volk, 1990). Thus, we propose that

H4: Love of nature will have a positive influence on behavioural intention towards sustainable products.

5.3 Man-nature Orientation (MNO) as Cultural Value

For the present work, we defined man-nature orientation (MNO) as *"an ability of an individual to live in harmony with nature* (Kluchhohn and Strodtbeck, 1961)." People with high man-nature orientation believe in living in harmony with nature whereas those with low try to have dominance over nature. People with a high man-nature orientation think that they cannot destroy the environment and should work to protect it.

The interdependence theory suggests that man and nature are interdependent on each other for their needs. Based on this theory, we suggest that man-nature orientation, a cultural value aspect, positively influences behavioural intention. MNO is an integral value orientation of one life that shapes the environmental-related behaviour of an individual and leads to a positive effect on nature (Afridi et al., 2021; Sreen et al., 2018; Chekima et al., 2016; Sihombing, 2007; Chan, 2001). Few scholars have identified the effect of MNO on environmental concern (e.g., Poortinga et al., 2004; Schultz and Zelezny, 1998; Stern and Dietz, 1994). Thus, we infer that people with a man-nature orientation leads to increased desire or interest among consumers for sustainable products as a way of expressing their concern for environmental protection and a sustainable lifestyle. In the extant literature, several studies have explored the role of man-nature orientation in influencing behaviour of an individual (e.g., Chekima et al., 2016; Chan, 2001) and found a positive role in influencing the behavioural intention of an individual with regard to the environment. In an Indian context, Sreen et al. (2018) found that man-nature orientation is positively related to the purchase of environment-friendly products. The present work further contributes to enhancing the understanding of man-nature orientation on sustainable consumer behaviour. Based on the prior literature, we propose that

H5. Man-nature orientation will have a positive influence on behavioural intention towards sustainable products.

5.4 Connectedness to Nature (CN) as Emotion

The present work rests upon the conceptualisation of biophilia hypothesis that considers emotional account and defines CN as *"humanity's innate affinity for and interest in forging connections with the natural world (*Wilson, 1984, *p. 1)".* In line with the biophilia

hypothesis, we argue that individuals with a sense of connection with nature understand that their consumption patterns impact the natural environment in varied ways to create a sustainable system benefitting all in the ecosystem. In the extant literature, the theoretical ties between connectedness to nature and environment-related behaviour have been studied (e.g., Neaman et al., 2021; Otto et al., 2021; Jaiswal and Bihari, 2020; Whitburn et al., 2020; Omoto and Packard, 2016; Kudryavtsev et al., 2012; Brügger et al., 2011; Dutcher et al., 2007; Kals et al., 1999; Hungerford et al., 1990). Prior research shows the significance of connectedness to nature in fostering environmental behaviour CN accounts for more variance than other variables in fostering environment related behaviour as highlighted by Steg and Vlek (2009). A sense of connectedness helps to establish forging relationship with nature leading to the formation of stronger ties with nature. Connectedness to nature is also related to environmental beliefs and values, environmental concern, engagement with nature, and green purchase behaviour (Jaiswal and Bihari, 2020; Brügger et al., 2011; Dutcher et al., 2007). In the digitized era that we are in, there is a growing disconnection of individuals from nature. It is crucial to find out ways of reconnecting individuals with nature to meet the goals of sustainable development (Zylstra et al., 2014; Folke et al., 2011). Through the present work, we aim to develop the perspective that those who feel a connectedness to nature will not damage the natural environment in any way because of the belief that nature is a part of oneself and damaging nature is equivalent to harming oneself. Therefore, we propose that

H6. Connectedness to nature will have a positive influence on behavioural intention towards sustainable products.

Mediation Effect

MNO is a cultural value that can impact the belief system of individuals and guide their principles. This in turn can affect other psychographic variables. In the extant literature, few studies have found a positive relationship between MNO and attitude (e.g., Sreen et al., 2018; Wijaya, 2009; Chan, 2001). The present work aims to explore how MNO impacts the specific emotion of an individual with regard to environmental-related behaviour. The culture of an individual impact emotions. Wang and Wu (2016a) found that cultural values impact the emotion of an individual with regard to their water-saving behaviour. Indians are believed to be high on man-nature orientation values since the Indian culture believe to live in harmony with nature and follows practices like worshipping nature. In the literature, it has been

documented that people with a man-nature orientation believe in following group norms and behaving in accordance with society. They have a high sense of awareness regarding the growing pressure on the environment due to the activities of mankind and therefore there is more sense of pressure on behaving in a sustainable way from groups (families, neighbours, colleagues, friends, and society). That implies a stronger subjective norm. Besides, we believe that people with high MNO are also more likely to experience a sense of responsibility for behaving in accordance with the group norms; therefore, they are more positive in perceived environmental responsibility. Therefore, we propose that

H7. Attitude will mediate the relationship between man-nature orientation and behavioural intention towards sustainable products.

H8. Subjective norms will mediate the relationship between man-nature orientation and behavioural intention towards sustainable products.

H9. Perceived environmental responsibility will mediate the relationship between man-nature orientation and behavioural intention towards sustainable products.

H10. Love of nature will mediate the relationship between man-nature orientation and behavioural intention towards sustainable product.

It has been documented that those who feel connected to nature exhibit a higher tendency to show concern for society and are perspective-taking of another person (Mayer and Frantz, 2009). They believe in working towards community wellness and promoting social engagement (Weinstein et al., 2009). They have a strong desire to fulfil their social roles, live in social harmony and follow subjective norms. Few studies in the literature have documented a relationship between subjective well-being and CN (e.g., Mayer and Frantz, 2004). People who exhibit higher connectedness to nature are more likely to perform behaviour that is beneficial to nature. The present work posits that individuals who are highly connected to nature have more perceived behavioural control in deciding to work towards environmental well-being. The feeling of seeing oneself as part of nature may elicit a positive state such as care and love for nature (Vining et al., 2008). Kals et al. (1999) advocate that the

past and present experiences of an individual with nature will impact their affection for nature. Dong et al (2020) documented that those who stay in contact with nature show a more emotional connection with nature. Therefore, we propose the following hypothesis in relation with connectedness to nature

H11. Attitude will mediate the relationship between connectedness to nature and behavioural intention towards sustainable products.

H12. Subjective norms will mediate the relationship between connectedness to nature and behavioural intention towards sustainable products.

H13. Perceived environmental responsibility will mediate the relationship between connectedness to nature and behavioural intention towards sustainable product.

H14. Love of nature will mediate the relationship between connectedness to nature and behavioural intention towards sustainable product.

5.5   Propensity to Anthropomorphise Nature as Moderator

In an environmental context, nature is often treated as human-like. In the extant literature, the impact of the anthropomorphism of nature on the behavioural intention with regard to the environment has been studied and it acts as a facilitating factor (Zhu et al., 2019; Tam et al., 2013). Although the link between CN and MNO with the behavioural intention for environmental-related behaviour has been identified, it is not clear when and how the effects are more profound. The present study exploring the moderating role of an individual's propensity to anthropomorphise nature could shed light on how characteristics difference of an individual could affect the motivation and in turn the emotional response. We aim to explore when and how the propensity of an individual to anthropomorphise nature could further strengthen or weaken the emotional response and behavioural intention towards SP. This would guide marketers to create tailored marketing interventions that are in line with the motivation of consumer and are more effective in moulding sustainable choices of consumers. Thus, our study aims to bridge the knowledge gaps in the literature by exploring

the boundary conditions relationship between anticipated emotions (specifically, love of nature) and sustainable consumption, with a particular focus on the role of anthropomorphism of nature as a moderator.

We believe that the propensity to anthropomorphise nature along with values and emotions will have a greater impact on sustainable behavioural intentions. When an individual humanises nature, they feel emotionally connected with nature and their cognitive beliefs get activated (Tam et al., 2013). If an individual believes that nature is human, it pervades the emotional response (Ketron and Naletelich, 2019; Zhao et al., 2019) and cognitive beliefs that a person should coexist with nature and should avoid taking any actions that disturb harmony with nature (Sreen et al., 2018). We propose through the present work that the effect of such beliefs tends to be greater on the relationship between MNO and CN on the behavioural intention for sustainable consumption. This also implies that MNO and CN together form a strong inclination to protect nature, especially for individuals who believe nature is human. In the extant literature, there are pieces of evidence that suggest that the anthropomorphism of nature exerts an impact on sustainable consumer behaviour (e.g., Dong et al., 2020). Based on that, we propose that different tendencies to anthropomorphise nature may have a different effect on the relationship between MNO as well as a CN on the ATT, SN, PBC and LN.

Anthropomorphism of nature will have a negative moderating impact on the relationship between MNO, CN and ATT towards sustainable consumption behaviour as well as on the relationship between MNO, CN and LN as we believe that in individuals with a greater propensity to anthropomorphise nature, the link between MNO and ATT towards sustainable consumption behaviour, as well as LN, is strong as these individuals already have higher levels in these variables. Thus, consumers with a higher tendency to anthropomorphise nature will be less susceptible to the relationship between man-nature orientation and attitude towards sustainable consumption behaviour. Therefore, we propose that

H15. Propensity to anthropomorphise nature moderates the effects of man-to-nature orientation values on TPB constructs and LN.

H15a. Propensity to anthropomorphise nature moderates the effects of man-to-nature orientation values on attitude towards sustainable products such that the effect is lesser for individuals with a high propensity to anthropomorphise nature.

H15b. Propensity to anthropomorphise nature moderates the effects of man-to-nature orientation values on subjective norms such that the effect is higher for individuals with a high propensity to anthropomorphise nature.

H15c. Propensity to anthropomorphise nature moderates the effects of man-to-nature orientation values on perceived environmental responsibility such that the effect is higher for individuals with a high propensity to anthropomorphise nature.

H15d. Propensity to anthropomorphise nature moderates the effects of man-to-nature orientation values on the love of nature such that the effect is lesser for individuals with a high propensity to anthropomorphise nature.

H16. Propensity to anthropomorphise nature moderates the effects of connectedness to nature on TPB constructs and LN.

H16a. Propensity to anthropomorphise nature moderates the effects of connectedness to nature on attitude towards sustainable product such that the effect is lesser for individuals with a high propensity to anthropomorphise nature.

H16b. Propensity to anthropomorphise nature moderates the effects of connectedness to nature on subjective norms such that the effect is higher for individuals with a high propensity to anthropomorphise nature.

H16c. Propensity to anthropomorphise nature moderates the effects of connectedness to nature on perceived environmental responsibility such that the effect is higher for individuals with a high propensity to anthropomorphise nature.

H16d. Propensity to anthropomorphise nature moderates the effects of connectedness to nature on the love of nature such that the effect is lesser for individuals with high propensity to anthropomorphise nature.

5.6   Involvement with the Product as Moderator

Based on *"dual process theory"* or the *"elaboration likelihood model of attitude change"*, the two routes of persuasion for change of attitude namely *"central route and peripheral route"* are used (Petty and Cacioppo, 1986). Depending upon the level of involvement, different individuals process the information with regard to the product they consume differently while deciding on a product (Zaichkowsky, 1985). When the involvement with the product category is high, a person usually takes central route of persuasion and careful consideration is given in making final decision while if the involvement is less the information is processed using the peripheral route and not much information search is done (Strubel and Petrie, 2016; Suh and Youjae, 2006). In highly involved product category, extended search is done in making the decision and critically all the other alternatives are evaluation before deciding for the final product. Therefore, we argue that the level of involvement an individual has with regard to the product category will guide the product-consuming behaviour of an individual. Thus, we believe that the behavioural intention of an individual will be guided by his involvement with the product category (Suh and Youjae, 2006). Therefore, the present study takes into consideration the moderating role of product (apparel) involvement in influencing the relationship between TPB constructs as well as love of nature and behavioural intention towards sustainable apparel (Li et al., 2022; Kautish and Khare, 2022; Kumar and Yadav, 2021; Tung et al., 2017; Novak and Biocca, 2003). For the present work, we define product involvement as the level of interest or engagement a person has in a certain product category (Pandey and Yadav, 2023). The level of absorption, concentration and immersion in a certain product category are the key considerations for understanding the involvement with the product category (Taheri et al., 2014). For some individuals, apparels are considered to be high involved product category. It makes them delighted to buy or think of their apparels as their belongings (Flugel, 1929). Considering the ELM model, we argue that for highly involved individual, any cue related to their interest will make engaged and arouse their motivation towards it. They would be more sceptical that leads to thorough information search (Warrington and Shim, 2000). Therefore, we hypotheses the following

H17. Level of involvement with products moderates the effect of TPB constructs and LN on behavioural intention towards sustainable products.

H17a. Level of involvement with products moderates the effect of attitude on behavioural intention towards sustainable products such that the effect is lesser for high-involved individuals.

H17b. Level of involvement with apparels moderates the effect of subjective norms on behavioural intention towards sustainable products such that the effect is higher for high-involved individuals.

H17c. Level of involvement with products moderates the effect of perceived environmental responsibility on behavioural intention towards sustainable products such that the effect is higher for high-involved individuals.

H17d. Level of involvement with products moderates the effect of Love of nature on behavioural intention towards sustainable products such that the effect is higher for high-involved individuals.

Appendix II defines all the important constructs used in the study while Appendix III presents all the relevant literature on the constructs used in the study.

The conceptual framework presented in Figure 2 shows the relationships between all the constructs as a whole. For the present work, we have reviewed relevant theories to form a strong theoretically grounded framework that could better predict the behavioural intention and subsequent behaviour of an individual. In the extant literature, the theory of reasoned action (TRA) and the theory of planned behaviour (TPB) have been widely used to understand the behavioural intention and subsequent behaviour of an individual. The TPB model has better explanatory power as compared to TRA because it also incorporates PBC as one of the important factors to predict the behavioural intention of an individual (Paul et al., 2016). However, it has been argued that such theoretical models are not much comprehensive in nature and there exists a gap between the attitude and behaviour of an individual. Thus, it can be inferred that various other factors exist that affect the behavioural intention and subsequent behaviour of an individual (Biswas, 2017). Therefore, there is a need to create an inclusive framework using a multi-theoretical way that can improve the predictive capability of the model. It is believed that the inclusion of the attitudinal, affective and cognitive components in the same framework would be helpful in gaining better insights into an individual response towards attitude, intention and behaviour of an individual. For the present

work, we have used the TPB, commonly employed in studies explaining environment-related behaviour (Ajzen, 1991). As already discussed, TPB hypotheses that ATT, SN and PBC components as the predictor of behavioural intention and subsequent behaviour (Ajzen, 2001). This theory represents a strong background to predict an individual's behaviour towards a particular issue and also accounts for the role of other important contextual factors (Ajzen, 1991). This is one of the widely used theories in the field of consumer behaviour and is recently gaining importance to understand sustainable consumer behaviour (e.g., Clark et al., 2019; Kumar et al., 2017). The theory can account for more than 60% of the variances in the field of environment-related behaviour as noted by various researchers (de Leeuw et al., 2015; Moser, 2015). Due to this robustness, we have employed TPB as the theoretical framework for the present work. Like other researchers, we have substituted 'perceived behavioural control' with 'perceived environmental responsibility' to account for the internal facilitating factors towards environment-related behaviour. Prior literature has documented the important role of incorporating behavioural intention into environment-related behaviour (e.g., Nguyen et al., 2016), therefore we also incorporated the behavioural intention as the centre of the model for the present work. There are calls from various researchers exploring the phenomenon of sustainable consumer behaviour to incorporate various other factors in the TPB models to shorten the attitude-behaviour gap. The present work extended the theoretical framework with the inclusion of the emotional factor 'love of nature' to improve the predictive power further. To date, there is a dearth of literature investigating the role of specific emotions like the love of nature in predicting environment-related behaviour.

As documented in the extant literature, behavioural intention towards sustainable products is the outcome of the attitude, subjective norms, perceived behavioural control (perceived environmental responsibility). We also accounted for the role of emotional factors like love of nature in guiding the behavioural intention. Love of nature is the multi-dimensional construct that consists of passion, intimacy and commitment as its sub-dimension. We also focused on the role of MNO and CN as the potential antecedents to TPB constructs and LN that in turn influence the behavioural intention of an individual towards sustainable products. The framework also identified the role of anthropomorphism of nature as a moderator in influencing the relationship between man-nature orientation as well as connectedness to nature and TPB constructs and love of nature. Finally, the involvement of the product category also influences the behavioural intention. Therefore, the framework also includes

the role of product involvement as the moderator in guiding the relationship between the TPB constructs as well as love of nature and behavioural intention towards sustainable apparels.
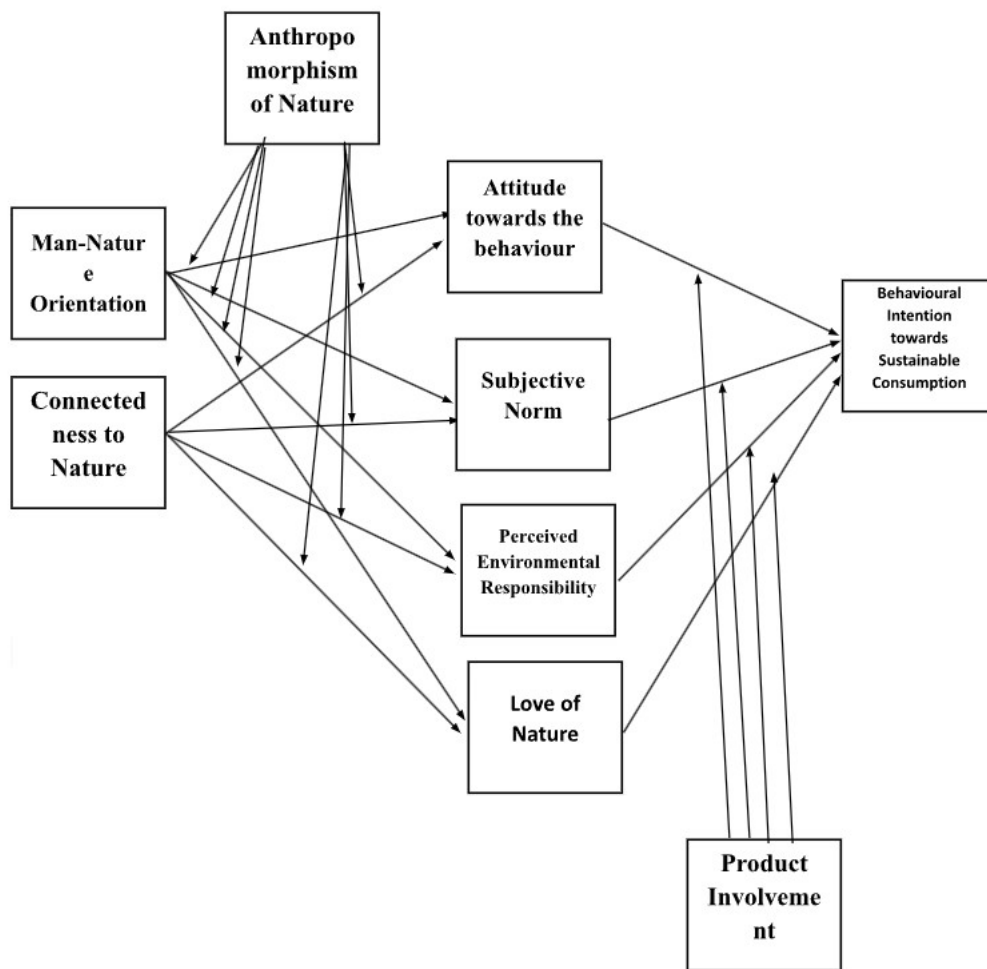
Figure 2: Conceptual Framework

Chapter VI

Research Design

This chapter explains the methodology used to carry out research for the present work. The key aim of any research is to explore why an event occurs and how theories could be extended or new theories could be developed to better understand a phenomenon (Kreuger and Neuman, 2006). The present work is applied research exploring the role of emotions like the love of nature in driving the behavioural intention towards sustainable products in an emerging market context namely India. The aim of the present work is to explore the role of emotional factors along with cognitive and attitudinal ones in explaining the behavioural intention of an individual towards sustainable products. We used the existing theory namely the Theory of Planned Behaviour and augmented the role of an emotional factor love of nature using Sternberg's Theory of Love in explaining the behavioural intention of an individual. Besides, the other theories namely Biophilia Hypothesis, Interdependence Theory, Elaboration Likelihood Model of Attitude Change and Three-Factor Theory of Anthropomorphism also guided the conceptual model. Therefore, this is also based on existing theories to explore the phenomenon of sustainable consumer behaviour through a more robust model.

The triangulation approach which is based on a combination of different methods is widely used to generate better insights and enhance the generalizability of the results (Hussein, 2009). For the present work, the mixed-method research approach is employed that uses integration of qualitative and quantitative techniques (Olsen, 2004; Jick, 1979). The use of a mixed-method approach allows us to gain better insight and also in cross-checking the results

of the study (Wilson, 2014; Bryman, 2011). In this approach, first important constructs are identified and confirmed with the help of qualitative analysis followed by quantitative analysis. In the qualitative analysis, based on the literature review, a few concepts are identified related to the phenomenon under study and then using some techniques like in-depth interviews or focus groups, these important constructs are verified and underlying themes and patterns are identified related to the current research settings (Ezzy, 2013). The qualitative methods are useful in giving new insights and directions to the research thereby developing new theories with newer constructs in combination with established scales (Morgan, 1998). The use of qualitative techniques helps to conceptualise a framework that can be further confirmed with the help of quantitative techniques that involve data collection from a wider population (Grey and Densten, 1998). The quantitative methods are widely used to test the developed scales as well as the hypothesis in a large sample. Thus, for the present work, we employed qualitative techniques followed by quantitative techniques.

6.1 Research Context and Sampling Frame

Many studies have also found that involvement (INV) with the product category influences behavioural intention (BI) of an individual (Rahman et al., 2018). For the present work, we selected sustainable apparel (SA) as the product category to test the BI of an individual considering the elaboration likelihood model (ELM) (Petty and Cacioppo, 1989). It is believed that the behaviour of an individual also varies according to the product category as noted by Barbarossa and de Pelsmacker (2016). The selection of apparel as a product category for the present study is useful because apparel is a regularly consuming product while other product categories (like cosmetics, eco-packaging, organic food, electronic appliances, etc.) also relate to other benefits more than environmental concerns. The apparel industry contributes heavily to environmental concerns throughout all stages from production to disposal. Thus, we selected apparel as the research context and look at the moderating effect of the product involvement (apparel) in moulding the behavioural intention of an individual towards sustainable apparel.

We have selected the emerging market context of India to collect the data. Constructs like PAN, CN, LN, etc. used in the present work are culturally sensitive (Ketron and Naletelich, 2019; Tam et al., 2013). In the developed country context, there exist few studies that have

worked on these constructs, however, in the emerging market context like India, the literature on the human-nature relationship and sustainable consumer behaviour needs more insights (Dhir et al., 2021). It is interesting to explore the human-nature relationship in this context because the cultural values and traditions of India believe in being in harmony with nature and it is reflected in their rites and rituals when they worship various natural forms like rivers, trees, idols etc (Sreen et al., 2018). Besides, with growing awareness about the importance of sustainability among Indian consumers, it is important to generate more insights into their sustainable consumption behaviour as the existing literature is far and in between (Kumar et al., 2017). In the apparel context too, the insights on Indian consumer behaviour need more insights (Rausch and Koplin, 2021). The government and policymakers in India are continuously working to achieve the goals of sustainability (Kautish et al., 2020). For example, the Government of India has also launched Project Sustainable Resolution (SuRe) in 2019 to meet the Sustainable Development Goals, 2030.

6.2   Qualitative Findings

The qualitative study is done with the aim to explore consumers' perceptions regarding the role of nature in their day-day lives and how this relationship can guide their consumption behaviour. The participants were selected on the basis of convenient techniques in the context of India. The primary selection criteria for the participants are that he/she must be above the age of 18 and a graduate. The in-depth interview took place using video-conferencing platforms and each discussion lasted for about 30-35 minutes' time (Brounéus, 2011). The qualitative research has been carried out in three steps namely a) a brief background of the topic of the study to sensitise the participants, b) conducting an open-ended interview with the participants using a semi-structured questionnaire and c) an open-ended discussion with the participants to generate further insights (Roller, 2020; Peters and Wester, 2007).

During the qualitative discussion with the participants, they were asked the questions namely a) How do you define nature? b) are humans responsible for environmental degradation? c) Do you feel an emotional connection with nature? d) Do our cultural values shape our environment-related behaviour? e) Some people use Mother Nature and Nature's Son to humanize nature or the natural environment around us. Do you think these kinds of

expressions of human symbols make sense? Why or why not? This led to preparation of the list of all the constructs that can influence the phenomenon.

We analysed the data obtained from the qualitative study using the approach that included gaining firsthand insights from the information collected, directing to the data analysis, creating groups of similar data, identifying the relationship among constructs and finally conceptualising the themes (Ezzy, 2013; Taylor-Powell and Renner, 2003). Based on this analysis, the respondents' view of their relationship with nature emerged and the role of key constructs like perceived environmental responsibility, man-nature orientation values, emotional connectedness to nature and anthropomorphism in guiding environment-related behaviour of an individual is confirmed.

6.3 Measurement Instrument Development

Based on the confirmation of the important constructs emerging from the qualitative discussion, we prepared the measurement instrument called the structured questionnaire that helped us gather quantitative data. The structured questionnaire mainly comprises of three sections. The first section consists of the qualifying questions that filter the respondents. The second section consists of the definition of sustainable apparel and the constructs to be measured on validated scales. Finally, the last section consists of the demographic details of the participants. Using reliable and valid scales from the existing literature, we developed the initial questionnaire. We used a *"7-point Likert scale"* ranging from *"1 strongly disagree to 7 strongly agree"* to measure each variable. We adapted the items of a few of the constructs in accordance with the context of the present work. Furthermore, as guided by researchers, each construct should have a minimum of a three-item scale and we ensured to use at least three items scale for each construct (Lai et al. 2018). Appendix IV shows the details of the measurement scales used in the questionnaire. The questionnaire is designed in such a way that it limits the chances of social desirability and procedural biases (Chung and Monroe, 2003). For example, every respondent is asked to be honest, he is informed that there are no correct or incorrect answers, the confidentiality of the responses is ensured and the sequence of the questions is varied (Nederhof, 1985).

In the present work, we ensured control of the effect of important extraneous factors that are confounding in nature (Kalton, 1968). We also identified four control variables namely age, income, occupation, gender and education that could lead to confounding effects with the results. As identified by existing studies, these variables significantly influence sustainable consumer behaviour (e.g., Feil et al., 2020; Coskun et al., 2017; Nguyen et al., 2022, 2017).

6.4   Unit of Analysis

We have followed a quantitative cross-sectional survey method to collect the data with consumers as a unit of analysis (Wang and Cheng, 2020; Connelly, 2016). The participants will voluntarily participate in the study and they should be above 18 years of age and a graduate due to the conceptual understanding required to comprehend the questionnaire (Dhir et al., 2021). We also have kept a qualifying question that awareness of Sustainable Apparel is needed. The questionnaire is self-administered by the respondents meeting the pre-requisite criteria. We sent direct emails as well as posted the questionnaire links on various social media platforms. This also helps in reaching online shoppers too. With a growing e-commerce market, it is important to also target online shoppers (Guthrie et al., 2021). However, the challenge lies in the low response rate. Therefore, we also followed the snowballing sampling to fetch responses.

6.5   Sampling Technique

We have used the convenience sampling technique to collect the data for conducting primary research as it is one of the easiest and most cost-efficient ways of data collection without any compromise in the quality of data being collected (Dhir et al., 2021; Etikan et al., 2016). We used convenience sampling followed by the snowball sampling technique as the snowball technique helped us in getting more responses. This combination led us to effectively meet the sample size criteria (Kumar et al., 2017; Emerson, 2015).

6.6   Sample Size

There are different opinions and ways of choosing the appropriate sample size as suggested by well-known researchers and data scientists (e.g. Israel,1992). The determination of sample size is one of the crucial elements in analysing any hypothesised relationship in a conceptual model. The role of sample size is more critical while using structural equation modelling as compared to other techniques (Westland, 2010). If a smaller number of samples is there, then the results are not appropriate (Wolf et al., 2013). Following the recommendation provided by Kline (2011) for defining the requisite sample size, at least 200 participants are required for employing the structural equation modelling. Besides, Schumaker and Lomax (2010) also proposed to include participants between 250 and 500 while conducting structural equation modelling. Other researchers also propose a sample size between 300-500 as suitable for testing the measurement scales (Sekaran and Bougie, 2010; Malhotra and Peterson, 2002; Nunnally, 1978). In the present work, we used ten constructs with a total of 53 items. As proposed by Kline (2015) and Hair et al. (2015), the expected number of cases for one item is between 10-15 for the successful execution of SEM. Accordingly, we targeted around 600 (i.e., 600 > 53 items *10 = 530) for the present work.

6.7   Pretest

After designing the preliminary questionnaire, we conducted the pre-test to ensure that the instrument is able to receive quality data from the survey. The pre-test helped us in identifying and resolving any issues related to the questionnaire design and the survey process done to collect the data (Reynolds et al., 1993). Before administering the questionnaire to the respondents, we ensure to check for the content and face validity by pretesting the questionnaire with the help of a few experts in the field of consumer behaviour (Dhir et al., 2021; Ikert, 2019). We requested input from two professors and two industry people to check the quality of the questionnaire. Specifically, we asked them to share inputs on the following a) if the items used in the scale conveyed the intended meaning, b) if the length of the questionnaire does not cause fatigue among the participants and c) the logical flow of the survey. We implemented their suggestions and modified the language of a few items to make them easy to comprehend by the respondent.

6.8   Pilot Test

A small survey was conducted to perform the pilot test to check the suitability of the survey instrument. A pilot test helps to ensure that the questionnaire is clear, non-redundant and context-specific (Van Teijlingen and Hundley, 2002). It is also conducted to check the reliability of the scales used for the study. 105 potential respondents from the manufacturing industries were contacted for conducting the pilot test. The survey instrument used for the pilot test comprised all the items given in the chosen constructs. 87 respondents returned the filled questionnaires thereby generating an 82% response rate. Therefore, the pilot test was conducted on the 87 usable responses. Table 6.1. consists of the acronyms used for all the constructs that were used for the analysis. This table also contains Cronbach's alpha values of the constructs and the number of items that each construct contains. All the reliability scores were more than 0.70 which shows that the scales considered for the study are reliable (Brown, 2002).

Table 6.1 Reliability scores of Pilot Study

Scale	Cronbach Alpha
Man-Nature Orientation	0.623; if item deleted 0. 749
Subjective Norms	0.873
Propensity to Anthropomorphise Nature	0.917
Perceived Environmental Responsibility	0.661; if item deleted 0.811
Connectedness to Nature	0.892
Product Involvement	0.919
Love of Nature	0.948
Attitude towards SA	0.872
Behavioural Intention towards SA	0.954

N=123

6.9   Final Data Collection

We faced several challenges in the collection of data. First, we collected the data during the pandemic that restricted the personal calls or visits to the respondents. Second, the topic of the present work 'sustainable apparel' and 'human-nature relationship' are in the initial stages of conceptualisation not only in India but also across therefore the respondents needed more understanding of the concepts under study. Hence, we restricted our responses to individuals who are aware of the term sustainable apparel and are at least a graduate. The research was made more meaningful to the respondents by providing a formal definition of the term sustainable apparel and also informing the respondents about the purpose of the study.

The final survey began after the pilot test and preliminary analysis of the information. The questionnaire was sent to the target group and screening of the respondents was also done. Additionally, we also requested them to circulate the questionnaire to their social groups, peer groups and others. We collected data online through various platforms like Emails, WhatsApp, Facebook, LinkedIn, and other important social networking sites. We also ensured the quality of the data by keeping the identity of the respondents anonymous and explaining to them the purpose of research work for academics solely.

Chapter VII

Results and Analysis

7.1   Analytical Method

SPSS v22 and AMOS v24 software packages are used for the data analysis. This work used *"structural equation modelling (SEM) methodology"* to assess the proposed model (Anderson and Gerbing 1988). We used a two-phase approach for testing the hypothesis linked with the variables in the study. In the first phase, we conducted *"Exploratory Factor Analysis (EFA)"* and *"Confirmatory Factor Analysis (CFA)"*. In the second phase, we used structural modelling to examine the hypothesised relationship among the constructs used in the model (Hair et al., 2019). For testing the moderating and mediating effect, we employed Hayes (2013) PROCESS macro in SPSS. The succeeding sections elaborate on the detailed data analysis and results. Appendix V defines the important terminology used in the structural equation modelling techniques. Appendix VI presents the details of important model fit indices used in the structural equation modelling techniques.

7.1.1 Data Screening

Initial data screening is performed to figure out any missing values, unengaged responses and outliers. We performed multivariate data analysis to detect the presence of outliers and their impact on the data by calculating the Mahalanobis and Cook's distance.

7.1.2 Missing Values

Since we totally relied on the online survey, we kept it mandatory to answer all questions before the respondents submit the form. This helped us to avoid any missing values in the responses collected.

7.1.3 Unengaged Responses

When the standard deviation of the responses shows no or very less variation, it suggests that the respondents have filled out the questionnaire with less attention (Lowry and Gaskin, 2014). Such responses are treated as unengaged responses. They have a standard deviation score of 0.2 or less. In the dataset of 605 respondents, a total of 17 responses were found to be to have the exact same responses for all the questions and hence were treated as unengaged responses. These unengaged responses were removed from the dataset resulting in 588 responses in the dataset for further analysis.

7.1.4 Sample Profile

Table 7.1 shows the descriptive statistics of the dataset. The segregation of the sample is done on the basis of age, gender, income, occupation and education.

Table 7.1 Descriptive Statistics of the Dataset

Demographics	Frequency (F)	Percentage (%)
Age (in years)		
18-29	260	44.3
30-40	245	41.7
41-50	76	12.3
51-60	5	1.8
Above 60	2	0.3
Gender		
Male	361	61.4

Demographics	Frequency (F)	Percentage (%)
Female	227	38.6
Education		
Graduate	182	30.1
Master	332	56.5
Doctorate	68	11.6
Other	6	1.0
Occupation		
Student	227	38.6
Employed/Service	201	34.1
Professional	84	14.3
Housewife	24	4.1
Business/Self-Employed	51	8.7
Retired	1	0.2
Income (in INR)		
Below 20,000	150	25.5
20,000- 50,000	146	24.9
50,001- 80,000	122	20.1
80,001- 1,00,000	102	17.3
Above 1,00,000	68	11.6

(INR= Indian Rupees)

7.1.5 Multivariate Outlier Test

An outlier is defined as a data point or an observation in the data set that is considered as irrational or flawed in nature (Malhotra et al., 2017). As highlighted by McLachlan and Peel

(1998), the presence of the outlier in the data set across multiple variables have a tremendous impact on the results making it inconsistent. Therefore, it is crucial to detect and carefully treat the outliers to ensure consistent results. The two widely used methods to detect the presence of outliers are Cook's distance test and Mahalanobis distance test (Ghosh and Vogt, 2012). The Cook's distance test is used to find the influence of an independent variable (IV) on the dependent variable of any particular point in the dataset that helps us to identify the presence of outliers (Kannan and Manoj, 2015). Thus, Cook's distance is not meant to find the outliers, per se, but through calculating the influence on the outcome of a particular case that can be then removed from the dataset. This test can be performed using SPSS and a graph can be plotted (Field, 2000). If the Cook's distance is greater than 0.1, it is considered as an outlier and if the distance of this observation from other observation is also high then it is removed from the dataset. In the dataset we collected, we do not find any observation that has a Cook's distance value more than even 0.1 and therefore we can infer that there is no observation that stimulate or influence the regression results.

We also calculated the Mahalanobis distance test to detect the presence of outliers in the dataset obtained. If the value of the Mahalanobis distance is high, it suggests the presence of outliers but to ascertain it confidently, it is suggested to compare these values with the chi-square (χ2) distribution and if the p-value obtained is below 0.001 then it is treated to be an outlier. In the present dataset, we identified 5 cases that have χ2 p-value less than 0.001 and therefore considered them to be outlier they were removed from the dataset to remove their impact on the analysis results.

7.2 Multivariate Assumptions

7.2.1 Normality

In the present dataset, we obtained a fairly normal distribution for our indicators of the latent constructs as well as the demographic variables. To assess the normal distribution, we calculated the *"Skewness and Kurtosis"* as well as *"Kolmogorov-Smirnov Test"* and *"Shapiro-Wilk Test" (Thode 2002).*

7.2.1.1 Skewness and Kurtosis

Appendix VII shows the results of skewness and kurtosis. We have used 7-point Likert scale therefore it is crucial to calculate the skewness and kurtosis. As suggested, the value for skewness for all the items must vary between -2 to +2. We found the values for skewness within the required range and hence it can be concluded that there was no issue of skewness in the dataset (Geary, 1947). For assessing the results of Kurtosis, the value for all the items must be within the range of -2.5 to +2.5 (Shapiro et al., 1968). For our dataset, we found all the items within the range.

7.2.2 Multicollinearity

It is important to assess the multicollinearity to ensure the absence of overlapping of variables. If the issue of multicollinearity is present, we need to either remove the variable or form a second-order variable to overcome the issue. The "Variance Inflation Factor (VIF)" test is largely used test to detect the issue of multi-collinearity (Alin, 2010). The value of VIF must be less than 3 to assess the absence of multicollinearity (Mansfield and Biily, 1982). For the present work, we found VIF value less than 3 and all the tolerance value were greater than 0.1 indicating absence of multicollinearity. The VIF of each predictor variable are PER: 1.016; CN: 1.585; MNO: 1.674; LN: 1.1059; SN: 1.1045; ATT: 1.002.

7.3   Exploratory Factor Analysis (EFA)

This is the first multivariate technique applied to the dataset. They are mainly of two types of factor analysis namely *"Exploratory Factor Analysis (EFA)"* and *"Confirmatory Factor Analysis (CFA)"* for identifying the inter-relationship among the variables under study (Beavers et al., 2013). This technique is also more suitable when the correlation among the variables in the data set is more complex. These technique groups the highly correlated set of items in a single set called as factor. Thus, it is also called as dimension reduction technique. The set of items compressed in a single factor are conceptually linked. EFA is done before the CFA. EFA is an interdependence technique generally done for data summarisation and data reduction (Costello and Osborne, 2005). It generally helps to link the theoretical underpinnings of the phenomenon under study and also to assess the suitability to the measurement scales employed. For the present work, we performed EFA using the maximum likelihood method using the ProMax rotation as suggested by (Hendrickson and White,

1964). We set the count of the factors to 9 (i.e., number of constructs used in the model) with the eigen value greater than 1. For adequacy of test, we relied on the *"Bartlett's test for sphericity, communalities and total variance explained"*. We obtained *"Kaiser–Meyer–Olkin (KMO)"* value of 0.933, which is considered acceptable (Kaiser and Rice, 1974). Bartlett's test for sphericity produced significant results of 22403.512 at a p-value of 0.00 with a χ^2 value and 1540 degrees of freedom. Communalities is also another measure of sampling adequacy and its value is more than 0.6 for each item of all constructs. The 9-factor model explained a total of 71.34% of the variance which is greater than the permissible value of 50% (Yong and Sean, 2013).

7.3.1 Factor Loadings

This is an iterative process that also resulted in the deletion of certain items for improving the factor loadings as per the permissible limits (Sass, 2010). Especially, the items with low factor loadings and cross loading with difference greater than 0.3 were deleted. Items namely MNO3, MNO4, PER1, PER2, CN3, CN4, CN7, SN3, SN4, PAN5, BI4, LNP4, LNI4, were dropped. Appendix VIII and Appendix IX show the item-wise factor loading and final factor loading with number of the items deleted in each construct and list of the final items included along with their factor loading.

7.3.2 Uni-dimensionality

When there is more than one construct that need to be assessed, it is crucial to check for the unidimensionality. This ensures that only construct is explained by a group of items. This is one of the essential conditions for the testing and development of a theory. It also suggests the absence of covariance among the error terms as well as between the constructs (Gerbing and Anderson, 1988). In the present dataset, there was neither error covariance within construct nor between construct. The details of the communalities are shown in the Appendix X.

7.3.3 Common Method Bias

The variance in the responses is due to the instrument and not because of the predilections of the respondents is known as the common method bias (CMB) (Podsakoff et al., 2003). This bias or variance is related to the method of measurement instead of the indicators of the constructs used in the measurement (Jordan and Troth, 2020). The various reasons for the presence of common method bias are self-reported data by the respondents, use of the same measurement instrument to collect data, application of same instrument for collection of dependent and independent variable and relying on one platform for data collection. The results are biased due to Type I or II error or both due to presence of common method bias (Fuller et al., 2016).

For ex-ante approach, we ensure to take proper care before data collection. First of all, we excluded all the items that were ambiguous or confusing in nature (Podsakoff et al., 2003). Secondly, we informed all the respondents to ensure confidentiality and anonymity. We also informed that there are no correct or incorrect answers therefore they are expected to give honest response (Chang et al., 2020). For the ex-post approach, we employed Harman single factor test for testing the bias. It is suggested that a single factor must not explain more than 50 percent of the variance and emerge as a major factor, then it can be inferred that there is no presence of common method bias. We ran the exploratory factor analysis and found that of the 71.34 percent of the total variance explained, the initial factor explains only 24.33 percent of the variance. Thus, we infer that there is no presence of common method bias (Sass, 2011). Table 7.2 shows the results of Harman's test.

Table 7.2 Harman's Single Factor Test

Factor Analysis	Highest Percentage of Variance Explained (%)
Principal factor analysis with no rotation 40.7%	37.23
Maximum likelihood factor analysis with Promax rotation 38.4%	24.33

7.3.4 Reliability

It is crucial to check the reliability of all the constructs used in the study. This ensures the consistency of the measurement model and the tool used. When we recheck the measurement instrument through several ways and if it delivers steady results then it is believed to be reliable. Cronbach alpha's value is one of the well-established methods of assessing the reliability of the construct (Brown, 2002). If Cronbach's alpha value is more than 0.7 for each construct then the internal consistency is established (Nunnaly, 1978). Table 7.3 below shows the reliability statistics of each construct. It contains the details of each construct, their acronyms and Cronbach's alpha value. Table 7.3 shows that each latent construct has a good reliability and therefore they have a strong explanatory power thereby suggesting acceptable internal consistency.

Table 7.3 Reliability Statistics

Scale	Cronbach Alpha
Man-Nature Orientation	0.643; if MNO 4 deleted 0.71
Subjective Norms	0.829
Propensity to Anthropomorphize Nature	0.935
Perceived Environmental Responsibility	0.68; if PER2 deleted 0.702
Connectedness to Nature	0.895
Product Involvement	0.962
Love of Nature	0.948
Attitude towards SA	0.842
Behavioral Intention towards SA	0.845

N=588

7.3.5 Confirmatory Factor Analysis

Validity can be examined through assessing the convergent and discriminant validity. The convergent validity can be assessed using three criteria following the recommendations given by Fornell and Larcker (1981). First, the standardized factor loadings should be greater than

0.6 for all the items on the constructs. For all the items we obtained the factor loadings ranging from 0.67 to 0.92, thus meeting the suggested limit (Bagozzi and Yi, 2012). A few items that failed to meet the threshold level were deleted for further analysis. Second, the *"Average Variance Extracted (AVE)"* of each construct in the model must be greater than the permissible value of 0.5 (Hair et al., 2014). The values of AVE for all the constructs range from 0.52 and 0.76 which meet the requisite limit. Lastly, the *"Composite Reliability (CR)"* of all the variables should be above 0.7. All the variables have CR values above 0.7. These facts can be inferred from Tables 7.4.

Table 7.4 Convergent and Discriminant Validity of Measurement Model

	CR	AVE	MSV	ASV	MNO	PAN	CN	BI	PER	LN	PI	SN	ATT
MNO	0.701	0.515	0.367	0.712	**0.718**								
PAN	0.733	0.738	0.397	0.838	0.582	**0.859**							
CN	0.754	0.594	0.534	0.755	0.606	0.630	**0.770**						
BI	0.749	0.534	0.533	0.771	0.051	0.018	0.038	**0.776**					
PER	0.725	0.535	0.030	0.731	0.174	0.017	0.156	0.057	**0.732**				
LN	0.851	0.866	0.534	0.956	0.529	0.454	0.731	0.056	0.142	**0.931**			
PI	0.858	0.764	0.099	0.762	0.158	0.124	0.251	0.053	0.002	0.315	**0.874**		
SN	0.709	0.543	0.197	0.732	0.408	0.444	0.268	-0.107	0.083	0.218	0.068	**0.719**	
ATT	0.654	0.595	0.434	0.758	0.006	0.062	0.002	0.875	0.007	0.021	0.006	0.068	**0.802**

Note: The square root of AVE is represented in bold while the factor correlation coefficient is represented in plain

There are two ways to examine the discriminant validity (Cheung and Wang, 2019). First is the absence of cross loading and second is through the factor correlation matrix where all the diagonal values in the matrix needs to less than 0.7. As can be seen in Table 7.4, all the bold values in the diagonal matrix are more than the suggested limit of 0.7 and none of the construct is sharing majority of variance, therefore discriminant validity is established.

Besides, the value of average shared variance (ASV) as can be seen in Table 7.4. is less than the square root of the AVE of corresponding value, therefore discriminant validity is also established.

7.4   Measurement Model

We employed CFA to test the measurement model using the *"Maximum Likelihood Method (MLM)"* (Hair et al., 2021). As per the requirement, the value of Chi-squared/df must be less than 5, *"Comparative Fit Index (CFI)"*, *"Normed Fit Index (NFI)"* and *"Tucker–Lewis Index (TLI)"* must be more than 0.9, *"Root Mean Squared Error Approximation (RMSEA)"* must be less than 0.08 (Hu and Bentler, 1999). If the measurement model meets the criteria of these fit indices, it can be inferred that the conceptual model developed fits adequately with the data collected through the survey. As can be seen in Appendix XI, the fit indices of the measurement model are as per the suggested criteria i.e., chi-squared/df= 2.304; NFI= 0.909; RMSEA = 0.045; TLI = 0.931; CFI = 0.957.

7.5   Structural Model

After the confirmatory factor analysis, it is essential to check for the structural model fit in order to begin the hypothesis testing and examine the correlation among the variables under study. Using the AMOS, we initiated the testing of structural model through checking for the goodness of fit model. As per the requirement, the value of Chi-squared/df must be less than 5, *"Comparative Fit Index (CFI)"*, *"Normed Fit Index (NFI)"* and *"Tucker–Lewis Index (TLI)"* must be more than 0.9, *"Root Mean Squared Error Approximation (RMSEA)"* must be less than 0.08 (Hu and Bentler, 1999). If the measurement model meets the criteria of these fit indices, it can be inferred that the structural model fit exists for hypothesis testing. As can be seen in Appendix XII, the fit indices of the measurement model are as per the suggested criteria i.e., chi-squared/df= 2.681; NFI= 0.927; RMSEA = 0.065; TLI = 0.917; CFI = 0.926.

7.6 Hypothesis testing using Structural Model Analysis

7.6.1 Direct Effects

The structural model is used to examine the structural model. As can be inferred from the results in Table 7.5, the behavioural intention towards sustainable apparel is positively by love of nature (β = 0.061, P < 0.05), attitude (β = 0.354, P < 0.001), and perceived environmental responsibility (β = 0.095, P < 0.05) but negatively by subjective norm (β = -0.144, P < 0.05). Thus, H1, H3, H4 is established. However, the results do not find support for H2. Besides, behavioural intention is also positively influenced by connectedness to nature and man-nature orientation. Thus, H5 and H6 is also established.

Table 7.5 Direct Effects

Hypothesis	Paths	Beta	S.E.	C.R.	P	supported
H1	ATT→ BI	0.354	.041	16.150	***	Yes
H2	SN→ BI	-0.144	.094	-2.088	.037	No
H3	PER→ BI	0.095	.058	.140	.039	Yes
H4	LN→ BI	0.061	.052	.0256	.042	Yes
H5	MNO→ BI	0.065	.059	.213	***	Yes
H6	CN→ BI	0.013	.061	1.097	.024	Yes

Taking into consideration the role of demographic variables namely age, gender, income and occupation as control variable, we found that age and gender with beta value of 0.084 and 0.147 respectively at p value of 0.001 has a significant role of BI towards sustainable apparel whereas income and occupation has significant no impact on the behavioural intention towards sustainable apparel and therefore have no role in controlling behavioural intention of an individual.

7.6.2 Mediation Effect

We employed SPSS PROCESS MACRO Model 4 in order to examine the mediation effect as suggested by Hayes (2013). This technique uses regression-based analysis to examine mediating effect by executing bootstrapping with 5000 samples of 95% confidence level. Bootstrapping is one of the widely used method to check mediation analysis to check the total, direct and indirect effect of the predictor variable on the DV. The advantage of using bootstrapping technique is that the indirect effect can be inferred on the basis of effect itself and not from series of tests done as in casual step methods. Here, if a statistically significant indirect effect exists, it implies that there exists a mediation (Mallinckrodt et al., 2006). The difference between the mediation can also be computed that can help us understand the contrasting effect of mediating variables between the dependent and independent variable. This test further has the advantage of higher statistical power as this test has reasonable control over Type 1 error (MacKinnon et al., 2012).

Table 7.6 Mediation Analysis: MNO

Hypothesis	MNO Effects	Beta	SE	LLCI	ULCI
	Total effects	.0538	.0130	.0283	.0794
	Total Indirect	-.0153	0.130	0.542	1.195
	Direct	.0385	0153	.0087	.0686
H7	**Specific: MNO/ATT/BI**	.0099	.0113	.0123	.0323
H8	**Specific: MNO/SN/BI**	-.0483	.0047	-.0580	-.0392
H9	**Specific: MNO/PER/BI**	.0079	.0023	.0035	.0126
H10	**Specific: MNO/LN/BI**	.0152	.0077	.0003	.0303

As can be inferred from Table 7.6., there exists a positive and significant indirect effect of ATT between MNO and BI as proposed by H7 with a beta value of .0099 at a 95% confidence interval. Thus, H7 is supported. Further, there is a positive and significant indirect effect of LN between MNO and BI with a beta value of .0152 at a 95% confidence interval. Thus, H10 is supported. Also, there is a negative and significant indirect effect of SN between MNO and BI with a beta value of -.0483 at a 95% confidence interval. Thus, H8 is not supported as we proposed a positive relationship. Lastly, there is a positive and significant indirect effect of PER between MNO and BI with a beta value of .0079 at a 95% confidence interval. Thus, H9 is supported.

We also check the direct effect of MNO on BI while controlling for the mediation effect and the results demonstrate that there is a significant and positive influence of MNO on BI with a beta value of .0385 at a 95% confidence interval. Thus, it can be inferred that there exist a partial mediation of ATT, LN, SN, and PER between MNO and BI. In addition, we also checked for the parallel mediation effects referring to the analysis steps proposed by Hayes (2009). The results of the parallel mediation enable us to contrast the differences in the mediating effect of ATT, LN, SN and PER. The results indicate that SN and LN have a greater significant mediating effect between MNO and BI in comparison to PER and ATT.

Table 7.7 Mediation Analysis: CN

Hypothesis	CN Effects	Beta	S.E.	LLCI	ULCI
	Total effects	.0302	.0130	.0047	.0558
	Total Indirect	.0110	0.017	0.542	1.195
	Direct	.0113	0153	.00856	.0836
H11	**Specific: CN/ATT/BI**	-.0060	.0124	-.0306	.0181
H12	**Specific: CN/SN/BI**	-.0330	.0033	-.0397	-.0266
H13	**Specific:**	.0076	.0022	.0036	.0120

Hypothesis	CN Effects	Beta	S.E.	LLCI	ULCI
	CN/PER/BI				
H14	**Specific: CN/LN/BI**	.0424	.0134	.0161	.0688

Next, we considered the indirect effect of ATT, SN, PER and LN on the relationship between CN and BI. As can be inferred from Table 7.7, there exists a negative and non-significant indirect effect of ATT between CN and BI as proposed by H11 with a beta value of -.0060 at a 95% confidence interval. Thus, H11 is not supported. Further, there is a positive and significant indirect effect of LN between CN and BI with a beta value of .0424 at a 95% confidence interval. Thus, H14 is supported. Also, there is a negative and significant indirect effect of SN between CN and BI with a beta value of -.0330 at a 95% confidence interval. Thus, H12 is not supported as we proposed a positive relationship. Lastly, there is a positive and significant indirect effect of PER between CN and BI with a beta value of .0076 at a 95% confidence interval. Thus, H13 is supported.

We also check the direct effect of CN on BI while controlling for the mediation effect and the results demonstrate that there is a significant positive influence on CN and BI with a beta value of 0.0497 at a 95% confidence interval. Thus, it can be inferred that there is a partial mediation of LN, SN, and PER between CN and BI. In addition, we also checked for the parallel mediation effects referring to the analysis steps proposed by Hayes (2009). The results of the parallel mediation enable us to contrast the differences in the mediating effect of LN, SN and PER. The results indicate that SN and LN have a greater significant mediating effect between CN and BI in comparison to PER.

7.6.3 Moderation Effect

We also examined the group differences based on the two moderating variables namely propensity to anthropomorphise nature and product involvement at three levels namely high, medium, and low. We conducted the moderation analysis using PROCESS Macro in SPSS as suggested by Hayes (2009).

Table 7.8 Moderation Analysis: PAN

Hypothesis		B	SE	T-value	p-value	LLCI	ULCI	Moderation?
DV: LN								
H16d	**CN→LN**	-.0285	.0059	-4.8072	.0000	-.0401	-.0169	Yes
H15d	**MNO→LN**	-.0249	.0070	-3.5829	.0003	-.0385	-.0113	Yes
DV: ATT								
H16a	**CN→ATT**	.0090	.0087	1.0352	.3006	-.0080	.0260	No
H15a	**MNO→ATT**	.0154	.0083	1.8529	.0040	.0009	.0317	Yes
DV: SN								
H16b	**CN→SN**	.0696	.0080	8.7200	.0000	.0539	.0852	Yes
H15b	**MNO→SN**	.0798	.0076	10.5105	.1002	-.0649	.0947	No
DV: PER								
H16c	**CN→PER**	.0658	.0085	7.7349	.0000	.0491	.0825	Yes
H15c	**MNO→PER**	.0512	.0082	6.2775	.0000	.0352	.0672	Yes

As can be seen in Table 7.8, we found a negatively moderated relationship by anthropomorphism between MNO and LN. One of the possible explanations is that individuals with a greater tendency to anthropomorphise nature already have feelings of oneness with nature and share an emotional bond with nature and anthropomorphic tendency leads to sustainable behaviour (e.g., Tam et al., 2013). Therefore, propensity to anthropomorphise nature will negatively moderate the effect of CN and MNO on LN. This is

because if propensity to anthropomorphise nature is already high then anthropomorphic tendency will not further strengthen the effect of CN and MNO on LN. Thus, we believe that individuals with a medium to high level of anthropomorphic tendency in comparison to low anthropomorphic tendency will be influenced. Besides, we found a positive moderated relationship by anthropomorphism between MNO and other links namely ATT and PER. We also found a positive moderated relationship by anthropomorphism between CN and other links namely SN and PER.

Table 7.9 Moderation Analysis: PI

Hypothesis	DV: BI	B	S.E.	T-value	p-value	LLCI	ULCI	Moderation?
H17a	**ATT→BI**	-.0139	.0065	-2.1316	.0331	-.0267	-.0011	Yes
H17b	**SN→BI**	-.0629	.0132	-4.7549	.0000	-.0370	-.0888	Yes
H17c	**PER→BI**	-.0084	.0133	-.6336	.5264	-.0345	.0177	No
H17d	**LN→BI**	.0676	.0096	7.0049	.0000	.0486	.0865	Yes

As can be seen in Table 7.9, for highly involved individuals, there is a lesser impact of attitude and subjective norms on behavioural intention. We find no significant impact of involvement level on the link between PER and BI. Lastly, for highly involved individuals there is a greater influence of LN on BI. Because people who are highly involved will look for aspirational benefits with the consumption of the product. Therefore, the emotional aspect of LN will be high when they are highly involved. Therefore, we found that for highly involved individuals there is a greater impact of LN on BI.

Chapter VIII

Discussion and Implications

8.1 Discussion

8.1.1 Sustainable Development Goals

Considering the importance of the achievement of SDGs, the topic of sustainable consumer behaviour has gained immense importance from both practitioners and academicians (Becerra et al., 2023; Lu and Kwan, 2023; Giannetti et al., 2023; Perera et al., 2020; Jacob-John et al., 2021; Alonso-Almeida et al., 2020; Dabbous and Tarhini, 2019; Han et al., 2017; Joshi and Rahman, 2015; Lin and Syrgabayeva, 2016). Therefore, it is of value to explore and gain better insights of the factors that can impact the sustainable consumption behaviour of an individual. Accordingly, with the present work, we offer some valuable insights into the role of critical factors or drivers that can affect their behavioural intention toward sustainable products using important theoretical frameworks like the Theory of Planned Behaviour, Sternberg's Theory of Love, Three-Factor Theory of Anthropomorphism and Elaboration Likelihood Model. Many countries especially the developing ones are coming up with policy initiatives to promote the sustainable apparel as this industry is one of the major contributors to the environmental issues. This work, therefore, extends the existing body of knowledge of sustainable apparel (Giannetti et al., 2023; Su et al., 2023; Sinha et al., 2022; Goyal et al., 2022; Makrides et al., 2021; Dhir et al., 2021; Rahman and Koszewska, 2020; Kempton et al., 2019; Dabbous and Tarhini, 2019).

8.1.2 TPB Constructs and SCB

The present work aims to gain more useful insights into the current state of sustainable consumer behaviour, especially in the emerging country context of India, and to determine the predictors of behavioural intention towards sustainable consumption as well as their relative importance particularly in the case of apparel. The review of the extant literature highlights some knowledge gaps. Previous studies are not theoretically sound as well as lack generalizability of the results (Kumar et al., 2021; Taneja and Ali, 2021; Perera, Kalantari Daronkola, & Johnson, 2022; Pristl et al., 2021; Wang, Wang, et al., 2022). Most of the studies are solely based on the theoretical foundations of TPB which has many shortcomings in terms of predictive capability. In an effort to overcome such shortcomings, we augmented the TPB theory with Sternberg's theory of love to account for the role of emotion in guiding behavioural intention. The results of the present work suggest that attitude towards environment-related behaviour can have a direct and significant positive impact on BI towards sustainable products. This is in line with the original TPB that also suggests a positive role of ATT on BI towards sustainable products and is also consistent with the previous studies in other contexts (Asadi et al., 2021; Orazi and Chan, 2020; Sparks et al., 2014; Ramayah et al., 2012; Chan and Lau, 2002). Besides, the subjective norm is found to be non-significant and negatively impacts behavioural intention. In previous studies too, a relatively weak relationship between SN and BI is identified (Asadi et al., 2021; Minton et al., 2018; Lundblad and Davies 2016; Panzone et al., 2016; Cialdini and Trost, 1998; Trafimow and Finlay, 1996). In the Indian context too, many studies have explored the role of subjective norms on intention towards environment-related behaviour (e.g., Kumar et al., 2017; Paul et al., 2016). In a collectivist country like India, it is quite contradictory to find a negative role of subjective norms on behavioural intention towards sustainable apparel but this is a potential novel contribution our study made. The reason for the negative relationship is that we have included an educated urban population as our respondents and this segment is evolving in their consumption pattern due to access to information and resources with improved economic conditions and is therefore more individualistic in nature. Besides, many scholars argued that in environment-related behaviour, personal norms are given importance rather than subjective norms (e.g., Tan et al., 2017; Petschnig et al., 2014; Bamberg and Möser, 2007; Stern, 2005). Personal norms are guided by intrinsic motives towards a particular behaviour than external rules or moral obligations (Wang et al., 2023; Perera et al., 2022b; Wang, Zhang, et al., 2022; Pristl et al., 2021; Arun et al., 2021; Sia and Jose, 2019;

Thøgersen, 2007; Kaiser, 2006; Kallgren et al., 2000; Ajzen, 1991). One of the other possible explanations could be the negative image created by the reusing or recycling of the products. This is also in line with the few studies in the extant literature that identified a negative impact of subjective norms on behavioural intention (Lee, 2011; Connell, 2010). We also found a significant positive impact of perceived environmental responsibility on behavioural intention towards sustainable products in line with existing studies (Yue et al., 2020; Culiberg et al., 2022; Kwon et al., 2020; Ünal et al., 2019; Ghazali et al., 2019; Ghazali et al., 2019; Ma et al., 2019; Steg and Nordlund, 2018; Rezvani et al., 2017; Bronfman et al., 2015; Eden, 1993). Thus, we found that more the positive evaluation of the product and more the perception of responsibility to work towards environmental protection, more positive the behavioural intention would be with regard to sustainable apparel. Thus, the present work offers insights by establishing a positive relationship between attitude and perceived environmental responsibility on the behavioural intention towards sustainable apparel.

We infer that an individual's attitude towards the behaviour and perceived environmental responsibility influence behavioural intention towards sustainable apparel of educated urban Indian consumers is more or less the same way as in other emerging and developing country contexts (e.g., Kumar et al., 2021; Zhao et al., 2014) as well as in developed country context (e.g., Wang, Wang, et al., 2022; Perera, Kalantari Daronkola, and Johnson, 2022; Pristl et al., 2021; Taneja and Ali, 2021; Dangelico et al., 2021; Chen, 2020; Kim and Seock, 2019; Wei et al., 2018; Vehmas et al., 2018; Matthews and Rothenberg, 2017; Nguyen et al., 2017; Han et al.,2017; Norum and Norton, 2017; Moser, 2016; Tang et al., 2011; Wells et al., 2011; Kang et al., 2013; Kaiser et al., 1999). However, the uniqueness of the present work lies in establishing an insignificant negative relationship between subjective norms and behavioural intention.

8.1.3 Inclusion of Emotion (LN) in TPB

Environmental-related behaviour being altruistic in nature needs to be explained considering the cognitive, conative as well as affective elements of the behavioural outcomes. Affective elements provide one of the important paths to nurture environment-related behaviour. Ecological affect also positively influences the green purchase intention of an individual as documented (Wong et al., 2024; Lu et al., 2020; Kanchanapibul et al., 2014; Chan and Lau,

2000; Perugini and Bagozzi, 2001). Existing research provides support for the role of negative as well as positive emotions in driving environmental behaviour (e.g., Zelenski and Desrochers, 2021; Mallett, 2012; van Zomeren et al., 2010).It is generally agreed that an individual who is emotionally invested with nature has more inclination to protect it (Habib et al., 2023; Haj-Salem et al., 2022; Lu et al., 2020; Lu et al., 2020; Odou and Schill, 2020; Kashmiri et al., 2019; Codini et al., 2018; Larson et al., 2017; Lerner et al., 2015; Wilson et al., 2014; Kudryavtsev et al., 2012; Halpenny, 2010; Grant and Wrzesniewski, 2010; Bamberg, Hunecke, and Blo, 2007; Nelissen et al., 2007; Kaiser, 2006; Leone et al., 2005; Perugini and Bagozzi, 2001; Kals et al., 1999; Richard et al., 1996; Hungerford and Volk, 1990). It has been argued in the existing literature that TPB is solely rational in nature and does not take into consideration the non-cognitive factors that can affect behavioural outcomes of an individual. Therefore, in order to compensate for the non-cognitive factors like emotions, we have added the love of nature to the original TPB model to expand it.

We have augmented the role of love of nature along with the TPB constructs namely attitude, subjective norms, and perceived environmental responsibility, and found that along with the TPB constructs, love of nature as a positive emotion has a direct and positive impact on the behavioural intentions towards sustainable apparels. The extant literature has identified the positive role of the love of nature with regard to environment-related behaviour, the existing work guides the literature by adding the love of nature construct with the Theory of Planned Behaviour (Dong et al., 2020; Dong et al., 2018). We found a significant positive role of love of nature on the behavioural intention towards sustainable apparel. This highlights that the more people feel for Mother Nature, the more their behavioural intention stimulus towards sustainable consumption. Existing research also finds that emotions drive the environment-related behaviour of an individual (Kals et al., 1999).

8.1.4 Parallel Multiple Mediating Effects

For the present work, we also considered the parallel multiple mediation analysis of predictor variables namely ATT, SN, PER and LN between cultural values (MNO), human-nature relationship (CN), and behavioural intention of sustainable product consumption behaviour. There exist many studies that prove the mediating effect of TPB constructs namely attitude, subjective norms, and perceived behavioural control (Sreen et al., 2018; Mancha and Yoder,

2015; Chan, 2001) but our study aims to make a novel contribution by not only investigating the role of emotion in explaining the behavioural intention but also the parallel mediation effect of these variables between cultural values, human-nature relationship and intention of environmental behaviour (Jiang and Lau, 2022).

8.1.5 MNO as Antecedent of Love of Nature

The interdependence theory suggests that man and nature are interdependent on each other for their needs. Based on interdependent theory, we found that man-nature orientation, a cultural value aspect, positively influences behavioural intention. This is in accordance with the previous studies that argue that MNO is an integral value orientation of one life that shapes the environmental-related behaviour of an individual and leads to a positive effect on nature (Afridi et al., 2021; Chekima et al., 2016; Chan, 2001). On the basis of value-attitude-behaviour model, we found that man-nature orientation as a cultural value exerts a positive influence on attitude towards sustainable consumption. This relationship suggests that value orientation and attitude of people towards behaviour are strongly related to each other in line with extant literature (e.g., Diyah and Wijaya, 2017; Mostafa, 2007; Chan and Lau, 2000). Sreen et al. (2018) found that MNO positively influence attitude toward green products that can in turn impact the formation of positive behavioural intention toward green products. Likewise, Sihombing (2007) also found that MNO positively impacts the consumption of green offerings. Besides, Liang and Chaipoopirutana (2014) also found positive impact of MNO and attitude in case of electronic products. Few scholars have also identified the effect of MNO on environmental concern (e.g., Poortinga et al., 2004; Schultz and Zelezny, 1998; Stern and Dietz, 1994). Thus, we can be inferred that MNO is a dominant value that influences the human-nature relationship and directs an individual to maintain harmony with nature. Thus, we infer that people with a man-nature orientation leads to increased desire or interest among consumers for sustainable products as a way of expressing their concern for environmental protection and a sustainable lifestyle. For the current study, we have considered emerging market context specifically India and as expected our results reflect the belief that Asian (including Indians) sees themselves as nature-oriented individuals and believes in maintaining harmony with nature. This is in contrast with the belief of people in Western regions considers themselves different from nature (de Mooij, 2004).

8.1.6 Mediation Analysis: MNO

The analysis results indicate that between MNO and behavioural intention, the mediating effects of subjective norm and love of nature are greater than that of PER and ATT. However, the effect of the subjective norm is greater but non-significant. There exist prior literature that supports that norms are ambiguous and it occasionally and slowly changes resulting in a greater impact on the intention and subsequent behaviour guiding the day-day activities and practices of an individual (Chung et al., 2012; O'Neal, 2007; Kalafatis et al., 1999; Ajzen, 1991) In the extant literature, there exist few studies that support the greater impact of SN and LN on behavioural intention (Tsarenko et al., 2013; Salazar et al., 2013; Lee, 2010) than that of PER and ATT. The findings also confirm the view that affect and norms play a stronger role than cognitive dimensions like the sense of responsibility and attitude.

8.1.7 CN as an Antecedent of Love of Nature

In the digitized era that we are in, there is a growing disconnection of individuals from nature. It is crucial to find out ways of reconnecting individuals with nature to meet the goals of sustainable development (Atik et al., 2023; Wang et al., 2023; Pearce et al., 2022; Zylstra et al., 2014; Folke et al., 2011). Those with a sense of connectedness to nature are more likely to take action to protect nature. A sense of connectedness helps to establish forging relationship with nature leading to the formation of stronger ties with nature (Shimul et al., 2024; Richter and Hunecke; 2022; Hanley et al., 2020; Barbaro and Pickett, 2016; Kudryavtsev et al., 2012; Kals et al., 1999; Hungerford et al., 1990). Through the present work, we found connectedness with nature positively leads to behavioural intention toward sustainable consumption. This finding supports the biophilia hypothesis that argues that individuals with a sense of connection with nature understand that their consumption patterns impact the natural environment in varied ways to create a sustainable system benefitting all in the ecosystem. Through the present work, we develop the perspective that those who feel a connectedness to nature will not damage the natural environment in any way because of the belief that nature is a part of oneself and damaging nature is equivalent to harming oneself (Brügger et al., 2011).

In the present work, by offering a cognition-emotional-behavioural path we explained the underlying mechanism of forging natural connection with nature and sustainability. For long-term sustained behaviour change among individuals, it is crucial to endorse the emotional bonding with nature along with the cognitive perspective taking. Specifically, we explored the role of love of nature on behavioural intention towards sustainable consumption through connectedness to nature. This is supported by extant literature that suggests that connectedness to nature and love of nature foster environment-related behaviour (Dong et al., 2020; Whitburn et al., 2020). In order to generate and foster a sense of connectedness and thereby feeling of love towards nature among individuals, a long-term perspective of reinstating emotional bonds with nature is required. These are the intrinsic factors that cannot be changed in the short term (Rosa and Collado, 2020). For fostering a sense of emotional connectedness to nature, it is crucial to expose to nature and nature-based experience. Thus, it can be inferred that reconnecting with nature is imperative for the achievement of sustainable development goals for protecting nature. The feeling of love towards nature arises from feeling of "we-ness" (Frantz and Mayer 2014, *p. 85*). The larger the extent of oneness with the natural world, the greater the emotional bond or feeling of love individuals share with natural environment (Schultz, 2002).

There are thoughts in the extant literature that instigate the importance of feelings of oneness with nature for protective behaviour. When Aldo Leopold (1949) wrote, *"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect"* (*p.8*). The present work finds support for this theoretical underpinning. In the extant literature, prior research shows the significance of connectedness to nature in fostering environmental behaviour (e.g., Otto et al., 2021; Neaman et al., 2021; Whitburn et al., 2020; Omoto and Packard, 2016). CN accounts for more variance than other variables as highlighted by Steg and Vlek (2009).

8.1.8 Mediation Analysis: CN

We also found a positive influence of man-nature orientation on subjective norms. This implies that those who feel connected to nature are more likely to form normative goals to protect nature. Individuals advocate feelings of oneness with nature in order to strive to the social norms as part of their socialization process and this reinforces their sustainable

consumption behaviour (Swimberghe et al., 2014). Our findings support Mayer and Frantz (2004) views that that feeling of oneness with nature predicts environment-related behaviour and subjective well-being. Furthermore, the results also support that connectedness to nature also generates a sense of responsibility among individuals. This is an extension to the findings of Leopold (1949), Klockner (2013) and Vaske and Kobrin (2001) that reflects that individuals' sense of responsibility towards the environment impacts their consumption behaviour and emotional attachment to nature leads to responsible behaviour towards nature. Thus, we extended these findings by providing support for the role of CN on BI through the mediating link of PER. This leads to the belief that in order to make the individual responsible for the impact of their action on nature fostering a sense of emotional connection with nature is important (Schultz, 2002). The present work also finds support for the role of CN on the emotion towards nature thus offering a cognition-emotional-behavioural path (Caro and García, 2007). This thus supports the view that there is a relationship between humans, the environment, and their behaviour (Ball and Tasaki, 1992).

8.1.9 Propensity to Anthropomorphise Nature as a Moderator

Next, we also explored the role of anthropomorphism of nature as a moderator on the relationship between MNO and TPB constructs as well as the love of nature and between connectedness to nature and TPB constructs as well as the love of nature. The present work showed that when nature is treated as human, it impacts the pro-environmental actions of an individual because people give moral consideration to other humans to nature (Waytz et al., 2010). The extant literature also shows that when nature is treated as human it generates a feeling of care and concern for nature as well as emotional responses are elicited and this in turn impacts environment-related behaviour. In the extant literature, anthropomorphism of nature leads to tendency to protect nature through the sustainable consumer behaviour (e.g., Yang et al., 2023; Wu et al., 2023; Pensini et al., 2022; Williams et al., 2021; Zhu et al., 2019; Ketron and Naletelich, 2019) through the mechanism of connectedness to nature or arousal of other emotions like fear, anger or concern for nature (Ahn et al., 2019; Tam et al., 2013). In the present work, we explored the understudied relationship by exploring the moderating effect of anthropomorphism of nature on the relationship between MNO as well as CN and attitude, subjective norms, perceived environmental responsibility and love of nature. In line with the previous research, the present work also confirms that a high propensity to anthropomorphise nature is associated with a stronger influence of MNO and

CN on each attitude towards behaviour, subjective norm, perceived environmental responsibility and love of nature. This is a novel contribution that has not been explored previously. We found a positive moderating effect of the propensity to anthropomorphize nature on the relationship between MNO and attitude, subjective norms and perceived environmental responsibility. While we found a negative moderating effect of propensity to anthropomorphize nature on the direct relationship between CN as well as MNO and LN. This implies that the propensity to anthropomorphize nature does not influence the impact of CN, MNO and LN as people already have a higher level of environmental beliefs and attitude so the anthropomorphic cue does not further strengthen the relationship. Whereas in the case of the relationship between CN as well as MNO and attitude, subjective norm as well as perceived environmental responsibility, the effect of the anthropomorphic cue is higher which leads to the formation of stronger environmental attitudes and beliefs.

8.1.10   Product Involvement as a Moderator

The present work also explores the influence of the involvement with the product category on BI towards SA. We explored the role of the level of involvement with the product category on the behavioural intention towards the sustainable product. We explored the moderating effect of the level of involvement on the relationship between attitude, subjective norm, perceived environmental responsibility and love of nature, and behavioural intention. The present work is novel in exploring the moderating effect of involvement with the apparel on the relationship between attitude, subjective norm, perceived environmental responsibility and love of nature, and behavioural intention. The present work found a positive moderating effect of the level of involvement with apparel on the relationship between love of nature and behavioural intention towards sustainable apparel. We believe that highly involved individuals look for more aspiration as well as hedonic values to support their feelings and concern for nature with regard to the consumption of apparel. Besides, we found a negative moderating effect of the level of involvement with apparel on the relationship between attitude and subjective norms.

8.2   Theoretical Implications

8.2.1 Sustainable Development Goals

The present work contributes to the achievement of SDGs, focused research areas of UN, specifically Goal 12 which deals with the area of Sustainable Production and Consumption. Thus, the present work extends and builds on the existing research on sustainable consumption and nature's well-being (Kautish et al., 2020).

8.2.2 Theory of Planned Behaviour

There are call from scholars to provide more insights on the role of cognitive and emotional variables that can influence behavioural intention with regard to sustainable behaviour (Wang, Wang, et al., 2022; Perera, Kalantari Daronkola, and Johnson, 2022; Taneja and Ali, 2021; Pristl et al., 2021; Kumar et al., 2021; Moser, 2016; Park and Ha, 2012). Therefore, in our present work we extended the literature by including the important constructs namely perceived environmental responsibility and love of nature as emotion in the TPB model to better explain the behavioural intention towards sustainable products. While, PER is studied recently in the existing literature, the present work is novel by accounting for the role of PER in TPB model. Also, love of nature is an under-studied variable specifically in the context of sustainability (Dong et al., 2020). Our work extended the basic model of TBP by additionally incorporating the role of PER and LN to assess the explanatory power of extended TPB model. Besides, we also primarily focus our work on a particular product category namely apparels, which is also instrumental for the achievement of SDGs.

8.2.3 Love of Nature

Although few studies have documented the role of love of nature as a powerful determinant of environment-related behaviour (e.g., Kautish et al., 2022; Dong et al., 2020), there are calls from researchers to explore its relevant antecedents. The present study investigated these gaps by exploring the role of man-nature orientation and connectedness to nature that can further provide useful recommendations for fostering environment-related behaviour.

8.2.4 Man-Nature Orientation

The role of cultural values namely MNO has been identified in explaining the environment-related behaviour. The present work explores the concept of MNO in a novel way and adds to the body of knowledge by proposing new model that links MNO with SCB. The overlooked concepts like attitude, subjective norms, PER and LN have been linked with MNO to establish the underlying process to better explain SCB. Thus, the results of this study also extend the literature on sustainable consumer behaviour (Sreen et al., 2018; Chekima et al., 2016). We also extend the literature on sustainable apparel by emphasizing the role of values specially man-nature orientation in enhancing a positive attitude and intention towards sustainable apparel. We also provide the boundary condition to induce man-nature orientation through anthropomorphism to promote sustainable consumer behaviour.

8.2.5 Connectedness to Nature

In the extant literature, the role of connectedness to others in promoting human-human or human-group relationship to promote behaviour has been documented (e.g., Atik et al., 2023; Pearce et al., 2022; Cwir et al., 2011; Tropp and Wright, 2001; Aron et al., 1991). We extended the past findings by exploring role of connectedness to nature in fostering human-nature relationship to promote environment-related behaviour. There exists a meagre literature that links the role connectedness to nature in promoting sustainability aspects (Jaiswal and Bihari, 2020; Davis et al., 2009). We explored the role of CN in promoting SCB through linking it with overlooked concepts like attitude, subjective norms, PER and LN. We also extend the literature on sustainable apparel by emphasizing the role of CN in enhancing a positive attitude and intention towards sustainable apparel. We also provide the boundary condition to induce CN through anthropomorphism to promote sustainable consumer behaviour.

8.2.6 Anthropomorphism of Nature

The findings of the present work broaden the current state of the literature on anthropomorphism and its role in sustainable consumer behaviour. The present study adds to the growing literature on the anthropomorphism of nature by contributing in several ways (Wu et al., 2023; Yang et al., 2023; Pensini et al., 2022; Williams at al., 2021; Zhu et al.,

2019; Ahn et al., 2014; Root-Bernstein et al., 2013; Tam et al., 2013; Chan, 2012). First, previous studies have established the role of anthropomorphism of nature on behavioural intention towards sustainable consumption, this study further adds to the literature on environment psychology by exploring the role of anthropomorphism as a moderator in governing sustainable behaviour (Williams at al., 2021; Gebhard et al., 2003; Atran et al., 2002). The present work establishes the varying effect of anthropomorphism of nature across individuals and cultures and identified the varying propensity to anthropomorphise nature among individuals and its effect on environmental psychology.

8.2.7 Sustainable Apparel

The existing studies in the area of sustainable apparel have narrow geographical focus mostly concentrating on developed countries. We accounted for the phenomenon in the emerging market context as it is believed that behaviour differs in different countries on account of the cultural differences and level of development. Thus, we extended the literature on Asian country context to account for behavioural intention towards sustainable apparel (Kautish and Khare, 2022; Kumar and Yadav, 2021). Through the present work, we extended the literature on sustainable apparel through exploring the role of overlooked constructs like MNO, CN, ANTH, LN, PER to explain behavioural intention of an individual (Rausch and Koplin, 2021; Kumar et al., 2021; Dhir et al., 2021; Kim and Seock, 2019; Wei et al., 2018; Vehmas et al., 2018; Han et al.,2017; Matthews and Rothenberg, 2017; Norum and Norton, 2017).

8.3   Managerial Implications

8.3.1 Sustainable Development Goals

The marketing landscape is continuously evolving due to the increased importance attached to goals of sustainable development across the globe (Kotler, 2011) and issues like climate change, and greenhouse gas emissions threatening the existence of mankind. Hence it is crucial to take action to persuade consumers to shift their consumption patterns towards sustainable behaviour. The importance of sustainability consumer behaviour is given more importance in developing countries due to economic activities like urbanisation, globalisation, industrialisation, changing lifestyles etc. Therefore, it is important for

corporates, retailers, policymakers, government, environmental advocates, etc. to incorporate the sustainability aspects in their business strategy and inculcate the human-nature relationship in their marketing and communication strategy to guide the environment-related behaviour of an individual. The present work guides marketers in the achievement of sustainable production and consumption among SDGs which UN has declared as a focus area for the well-being of nature by identifying and exploring the crucial factors like MNO, CN, LN and ANTH that affect sustainable consumption intentions. This can guide them in frame and adjust these crucial elements in their communication strategy that can impact consumer behaviour towards sustainability.

8.3.2 Subjective Norms

The insignificant role of subjective norms on behavioural intention towards sustainable products offers new insight into a collectivist society like India. This new avenue proposes that there is a need for retailers and multinational companies to think beyond the traditional use of a collectivistic approach at the societal level for the promotion of sustainable products and focus on more individualistic approaches like building nature-based experiences, moulding the cultural values of an individual to foster the relationship with nature, forging an emotional bond with nature, etc.

8.3.3 Love of Nature

Marketers promoting sustainable offerings must realise that emotion can also drive an individual's behaviour. Consumers can make choices that are more inclined with the need of protecting nature. They can go beyond pure consumerism and can make choices that are in benefit to nature to build stronger ties. Building up an emotional bond with nature can yield positive results towards sustainability. Emotions like the love of nature are one the recent marketing concepts that can guide the human-nature relationship to foster sustainable consumption behaviour (Dong et al., 2020). The affective component along with the cognitive ones can make individuals sensitive towards environmental issues. Marketers through various tactics can incorporate such affective components to shape individual environmental behaviour. Behavioural economists argued that individuals through unconscious affective reactions can make important decisions. Therefore, we suggest that marketers can capitalise on this affective component to translate the attachment into

corresponding behaviour. Messages that ignite such emotional component needs to be incorporated for attaining sustainable consumption among consumers. Messaging campaigns that employ such positive emotion like love of nature must be leveraged to reinforce its role on sustainable consumption intention to attain better quality of life.

8.3.4 Man-Nature Orientation

At present, most of the strategies used by marketers to promote sustainable consumption are focusing on increasing environmental knowledge to change their behaviour towards sustainable consumption. The present work suggests that marketers should also focus on moulding cultural value orientation independent of environmental knowledge as our study found that cultural values orientation like man-nature orientation influences sustainable consumer behaviour. Education programs therefore should not only focus on providing knowledge but also on developing values and attitude towards nature protection. Sustainability advertising can be designed in such a manner to reflect the value orientation of an individual towards nature. In ancient times, Indians on the virtue of their traditional and cultural values believe in the philosophy that all human-being should respect nature and behave in a way that is beneficial for the well-being of nature. This acted as an intrinsic motivation to work towards nature's well-being. However, due to rapid urbanization and industrialisation, modern societies have diluted these traditional beliefs and values therefore the intrinsic motivation to work towards the welfare of nature is lost. It is crucial to work on the development of motivation towards nature to shape human behaviour towards the environment. In a country like India with ecological beliefs rooted in tradition, marketers can yield the potential of a sustainable market through proper marketing strategy inculcating the value component. For example, marketers can design advertisements in which they highlight the planet and the importance of its protection in the message strategy. This would the individuals with a man-nature orientation to take action for the protection of nature and avoid the ones that are harmful to nature. For intensifying the need for environmental protection, an emotional appeal along with the functional one is crucial for motivating individuals to patronise sustainable consumption behaviour (Lee et al., 2010). Such nature orientation values and emotional connection with nature when expressed in ads and other modes of communication can influence individuals to develop positive attitude and intention towards sustainable practices.

8.3.5 Connectedness to Nature

In order to inculcate behavioural intention towards sustainability, it is crucial to create nature-based experiences for individuals by establishing direct contact with nature through activities like camping in forests, creating destinations on natural themes, etc to amplify emotional ties with nature that in turn leads to protective behaviour towards nature. Such emotional and cognitive bond with nature consequently leads to sustainable lifestyle and environmental values that then promote sustainable choices. It is crucial to move beyond the traditional approaches that believe that mere exposure to nature in the form of simple visits can lead to behavioural changes towards sustainable consumption. For example, nature-based themes in advertising or experiential activities in shopping malls and other places where exposure to nature is established can persuade an individual to reduce their consumption as well as motivate them to give preference to sustainable products. From local initiatives that involve simple activities that can only lead to short-term behavioural change, it is important to shift towards a policy-level intervention that can include creating habitat (like quiet spaces that allows interaction with nature) through proper urban planning and designing. Besides, the education system should also incorporate a key emphasis on connection and engagement with nature for the future generation with a focus on sectors like health, art, etc.

8.3.6 Propensity to Anthropomorphise Nature

The present findings have several practical and useful implication for the use of anthropomorphism as a low-cost tactic for protection of nature. In general, environmental protection campaigns can consider the use of anthropomorphic messages through the inclusion of human face, voice and body characteristics. Anthropomorphic cues in sustainability advertisements can regulate the consumption patterns of individuals. For example, the placement of anthropomorphic signs or anthropomorphic messages can persuade an individual to reduce their consumption of functional items like shopping bags, paper towels, water, electricity, etc.) as well as motivate them to give preference to sustainable products (e.g., recycled products). Thus, the present work offers useful insights into environment-related branding through the use of anthropomorphism of nature.

8.3.7 Sustainable Apparel

The present work holds important implications to the sustainable apparel companies, marketers and policymakers that aim to promote such product category. The findings offer a low-cost strategy of employing anthropomorphic cues in marketing related activities that could boost the sales of the sustainable apparel and practices. Besides, most of the efforts have been made in providing information to the consumers, however, the present work emphasise that marketers must understand the underlying reasons of why and how behavioural intention towards sustainable apparel are formed. Accordingly, we believe that providing requisite information of sustainability practices employed by companies to protect nature and evoking emotions through anthropomorphic cues are essential to promote the use of sustainable apparel.

Chapter IX

Conclusion, Limitations and Future Research Directions

9.1   Conclusion

It is crucial to make efforts to trigger intrinsic motivation of individuals towards environmental protection and their active participation in the achievement of SDG set by UN. In the present work, we augmented the role of love of nature into the model of TPB as it is argued that emotional factors are not considered into TPB model. We also accounted for cultural values namely man-nature orientation as critical antecedents to TPB constructs and LN that in turn drives behavioural intention towards sustainable consumption. We also accounted for role connectedness to nature as an emotional route in guiding behavioural intention through triggering the affective, cognitive and attitudinal component of behavioural intention. Lastly, we considered the role of propensity to anthropomorphise nature as a potential moderator in guiding the role of MNO as well as CN on the TPB constructs as well as LN. We chose sustainable apparel as the product category for testing the model and therefore we accounted for the role of involvement with the product category as a potential moderator in guiding the behavioural intention towards sustainable apparel. Through the application of structural equation modelling using AMOS, we analysed the data of 588 respondents from the emerging market context of India, it is found that: (1) LN has a positive and direct influence on behavioural intention towards sustainable consumption when incorporated into the TPB model along with the other TPB constructs namely ATT, SN and PER; (2) ATT, PER and LN have a positive and parallel mediation effect between MNO and BI whereas SN has a negative mediation effect between MNO and BI. Among them, SN and

LN has a greater influence on BI in comparison to ATT and PER; (3) PER and LN have a positive and parallel mediation effect between CN and BI whereas SN has a negative mediation effect between CN and BI. Among them, SN and LN has a greater influence on BI in comparison to PER; (4) PAN moderates the relationship between MNO and LN, ATT and PER as well as between CN and LN, SN and PER and (5) PI moderates the relationship between ATT, SN, LN and BI.

9.2   Limitations and Future Research Directions

9.2.1 Theoretical Limitations and Future Research Directions

The present work also has certain theoretical limitations that need to be accounted for while inferring the results. First, for the variables namely connectedness to nature and behavioural intention for sustainable products, we have used unidimensional constructs to assess the conceptual model and relationships among the variable. We proposed that future studies could make use of the multi-dimensional measures of the constructs wherein each sub-dimension could be analysed separately to gain better insights into its effect. For example, nature-relatedness can be used in place of CNS as a multidimensional construct.

Love is a complex phenomenon and most of the studies are currently employing interpersonal theory to love to approach this emotional state and apply it in different contexts (Whang and al., 2004; Ahuvia, 1993). Applying the interpersonal theory of love in different contexts like environmental psychology would make it difficult to capture all the peculiar aspects of this particular feeling and could lead to some issues in the interpretation of findings. From an environmental perspective, these studies may be limited since the diversity of the objects could be vast. Therefore, we believe the adaption of the scale of love applied to nature could be confounding. We propose to establish a specific love scale applied to nature with a clear concept as defined by many researchers. The novel findings in the field of love of nature should try to overcome these limitations.

We found a non-significant and negative role of the subjective norm in a collectivistic society like India that further calls for looking at some alternative form of the norm to account for the discrepancies. The use of the theory of planned behaviour posits the threat of intention-

behaviour gaps (Thøgersen et al., 2012) therefore some important construct like personal or moral norm needs to be considered to account for the normative belief and also to shorten the intention-behaviour gap. This could improve the predictive power of the model in morally oriented behaviour like conservation or sustainable consumer behaviour.

9.2.2 Methodical Limitations and Future Research Directions

The findings of the present work are in line with the theories employed and also established the general view on the matter under consideration, however, there are certain methodical limitations that need to be accounted for while considering the findings.

The abstract term 'love' has been explored through the use of qualitative techniques like in-depth interviews and quantitative techniques like surveys where the researchers explicitly use the term love to help the respondent understand the prototype of love (Ahuvia, 1993, 2005b) that could introduce some respondent bias. Since the concept of love is more strongly attached to interpersonal concepts in memory of an individual than to nature (Fehr and Russel, 1991), this could fall short of enabling the respondents to uncover specific dimensions of love of nature. Therefore, experimental designs that manipulate the construct of love can be used in future studies to overcome this effect among respondents.

For the present work, we have largely followed the prescribed guidelines to warrant superior data quality and gain enriching insights into the psychological process. However, we cannot deny with certainty the presence of social desirability bias. In the present work, we measured behavioural intention towards sustainable consumption through the use of a cross-sectional self-reported survey that could likely to socially desirable responses. Therefore, while inferring the results this bias needs to be accounted for.

We used the structural equation modelling technique to check the model that might be oversimplified. We suggest that future studies can make use of more elaborative methods like qualitative techniques or experimental studies to assess the model. The use of mixed method research design could yield the advantage of both qualitative and quantitative research designs and be helpful in generating meaningful insights into sustainable consumption.

We collected data from only educated urban respondents considering their ability to comprehend the concepts of the study. This selection could lead to biases as it is believed that educated respondents are more inclined to generate socially desirable biases when giving the responses to the survey (Kaiser et al., 2008). To overcome this shortcoming, we suggest that future research can make use of a more random approach to collect respondents for better generalisation of the findings.

The present work was conducted in the geographical setting of India, a heterogeneous nation with diverse cultures, therefore certain unforeseen factors that contribute to diversity at an aggregate level might have been overlooked and may impact the findings of the study. We measured the behavioural intention of an individual that is self-reported and therefore although we have checked for statistical significance, the translation of stated intention into actual behaviour may require further investigation. Many researchers using the theory of planned behaviour have pointed out this concern (Grunert and Juhl, 1995). Other important factors that could impact behavioural intention like price, availability, efficacy, etc. could be investigated in future research work.

9.2.3 Managerial limitations and Future Research Directions

The present work has chosen sustainable apparel as the preferred product category. This leads to generalisation limitations. Future studies can focus on other specific product categories namely organic food, electronic products, vehicles, green electrical appliances etc. to test the impact of variables studied in this research. Sustainable apparel behaviour is a complex phenomenon; therefore, we suggest that additional influential factors need to be considered while devising the behavioural intention scales and measurements. In the present work, we have controlled for the effect of gender, age, income and education. We suggest that future research can test for the moderating effect of the demographic characteristics of these variables. Further, we suggest testing for more mediators like pro-socialness, universalism, awe, empathy, etc. and more moderators like perceived environmental effectiveness, compassion, etc. that might influence the proposed relationship between the variables in the model. More prospective variables that could mediate or moderate the proposed associations between the variables can be identified to generate useful insights.

The present work is done in the emerging market context of India. The other country context can be taken up to understand the difference in different countries. Besides, future studies can be done to understand the cultural differences between two countries such as India and UK, India and China or India and the USA taking the present work as a base for further development. This would help practitioners with different perspectives to position their sustainable offerings to succeed in such countries. Lastly, we suggest that a longitudinal study can be done to understand the role of cultural shifts on the intention of consumers over time.

Appendix

Appendix I Literature on augmentation of other constructs in the TPB

Constructs	Studies
Moral norm *"The reflection of a personal value system in a given situation"*. (Klöckner, 2013, *p. 1030*)	Chu and Chiu, 2003; O'Connor et al., 2003; Smith et al., 2007; Chan and Bishop, 2013; Botetzagias et al., 2014, 2015; Poskus, 2015; Razali et al., 2020; Liu et al., 2020; Meng et al., 2022.
Self-identity *"The extent to which performing a particular role behaviour is an important component of an individual's self-concept"*. (White and Hyde 2012, *p. 787*)	Sparks et al., 1998; Puntoni, 2001; Terry et al., 1999; Thorbjørnsen et al., 2007; Hamilton et al., 2008; Fielding et al. 2008; White and Hyde, 2012; Mancha and Yoder, 2015; Reid et al., 2018; Carfora et al., 2019; Gkargkavouzi et al., 2019; Ali et al., 2023; Nigbur et al., 2010; Fielding et al., 2008.
Anticipated emotions Various emotional states (love, regret, shame, awe, pride, happiness, joy, and so on) predict the likelihood of exhibiting or inhibiting certain behaviour	Moons and Pelsmacker, 2001; Kim et al., 2013; Webb et al., 2013, 2014; Londono et al., 2017; Russell et al., 2017; Stephans et al., 2023; Wallace and Buil, 2023; Perugini and Bagozzi, 2023.
Environmental Values *"An ordered set of beliefs about*	Kaiser et al., 1999; Hansen, 2008; Vernier and Verbeke, 2008; Blok et al., 2015; Ye et al., 2017; Hassan and

Constructs	Studies
desirable end states that guide the selection or evaluation of environmentally relevant behaviours". (Morgan et al., 2015, *p. 36*)	Shiu, 2017; Farrukh et al., 2019; Yuriev et al., 2020; Fauzi et al., 2022; Oreg and Katz-Gerro, 2006.
Environmental Awareness *"Environmental knowledge and the recognition of environmental problems".* (Blok et al., 2015, *p. 57*)	Blok et al., 2015; Wan et al., 2017; Echegaray and Hansstein, 2017; Ahmed et al., 2021; Liobikienė et al., 2021; Budovska et al., 2022.
Sense of Community *"The feeling of affiliation with a collective within the organization". (*Dixon et al., 2015, *p.34*)	Tang et al., 2011; Dixon et al., 2015; Shen and Shen, 2021.
Self-Efficacy *"One's perceived capability to organize and execute the course of action required to produce desired results".* (Bandura 1997, *p. 2*)	Povey et al., 2000; Norman and Hoyle, 2004; Giles et al., 2004; Terry and Leary, 2005; Tang et al., 2011; Wang and Zhang, 2016; Shi et al., 2017a, b; Lee and Kim, 2018.
Past Behaviour Studied individual past behaviour	Mann and Abraham, 2012; Lizin et al., 2017; Richetin et al., 2012.
Habit *"The automatic performance of behavioural patterns triggered*	Visschers et al., 2016; Muñoz et al., 2016; Russell et al., 2017; Gkargkavouzi et al., 2019, Aboelmaged, 2021; He et al., 2021.

Constructs	Studies
by context cues—grows" (Klöckner 2013, *p. 1030*)	
Socio-economic and Demographic Factors Indicators such as gender, nationality, household size, age, household income, educational level, place of residence, and so on.	Zwickle et al., 2016; Echegaray and Hansstein, 2017; Blok et al., 2015.

(Source: Extended on the work of Yuriev et al., 2020)

Appendix II Constructs and their definitions used in the Study

Man-Nature Orientation *(Kluckhohn and Strodtbeck, 1961)*
Man-nature orientation (MNO) refers to *"the ability of an individual to live in harmony with nature"*.
Connectedness to Nature *(Schultz, 2002)*
Connectedness to nature refers to "the understanding that an individual has of her place in nature, that s/he places on nature and his/her actions that impact the natural environment".
Perceived Environmental Responsibility *(Lee, 2009)*
Perceived environmental responsibility refers to *"the extent to which an individual feels responsible for the environmental harm, and they account only themselves for making efforts to mitigate the effect."*
Attitude *(Ajzen, 1991)*
Attitude can be defined as *"the individual's favourable or unfavourable evaluations of performing a particular behaviour"*.

Subjective Norms *(Ajzen, 1991)*
Subjective norm that reflects *"an individual's perceptions of general social pressure"*.

Love of Nature *(Sternberg, 1986)*
Love of nature refers to "a three-dimensional construct consisting of the need for affiliation, the inclusion of the other in self, and the predisposition to help". Intimacy refers to *"feelings of closeness, connectedness, and bondedness in loving relationships."* Passion refers to *"the drives that lead to romance, physical attraction, sexual consummation, and related phenomena in loving relationships."* Commitment refers to *"the decision that one loves a certain other"* in the short run, and in the long run, it is defined as *"one's commitment to maintain that love."*

Behavioural Intention *(Ajzen, 1991)*
Behavioural Intention can be defined as *"indicators of how hard people are willing to try to perform the behaviour"*.

Anthropomorphism (*Epley, Waytz and Cacioppo, 2007*)
Anthropomorphism refers to *"tendency to imbue the real or imagined behaviour of non-human agents with human-like characteristics, motivations, intentions, or emotions"*.

Involvement with Product *(Traylor, 1981)*
Involvement can be defined as a *"consumer's understanding or recognition of a specific product. The higher level the consumer consideration of the product is called high involvement and the lower level, low involvement"*.

Appendix III Literature on Important Constructs

Constructs	Literature
Sustainable	Dong et al. 2020, 2021, 2022; Thiermann and Sheate, 2020; Shahi

Constructs	Literature
Consumer Behaviour	et al., 2020; Sheoran and Kumar 2020a; O'Brien, 2015, 2018; Baum and Gross, 2017; Wang and Wu 2016; Lundblad and Davies 2016; Lee et al., 2015; Van Der Linden, 2015; Cho et al. 2015; Hedlund-de Witt et al., 2014; Wang et al., 2014; Olsen et al. 2014; Wolff and Schönherr, 2011; Schäfer et al., 2011; Prothero et al. 2011; Steg and Vlek, 2009; MacDonald et al. 2008; Thøgersen and Ölander 2002; Antil, 1984; Kilbourne et al., 1997; Henion, 1976; Fisk, 1973.
Human-Nature Relationship	van den Born et al., 2018; Baum and Gross, 2017; Steg et al., 2014; Nisbet et al., 2009; Kahn et al., 2009; Becker, 2006; Orr, 2004; Zukin and Maguire, 2004; Mayer and Frantz, 2004; McMichael et al., 2003; Schultz, 2001, 2002; Degenhardt, 2002; Holbrook and Hirschman,1982.
Sustainable Apparel	Li et al., 2022; Kautish and Khare, 2022; Defarshi et al., 2022; Kumar and Yadav, 2021; Peters et al., 2021; Rausch and Koplin, 2021; Kumar et al., 2021; Dhir et al., 2021; Shrivastava et al., 2020; ElHaffar et al., 2020; Freudenreich and Schaltegger, 2020; Mukendi et al., 2020; Kim and Seock, 2019; Goworek et al., 2018; Tung et al., 2017; Cherny-Scanlon and Agnes, 2016; Ozdamar Ertekin, 2016; Armstrong et al., 2016; Lundblad and Davies, 2016; Armstrong et al., 2015; Anguelov, 2015; Ozdamar Ertekin and Atik, 2015; Kirchain et al., 2015; Streit and Davies, 2013; Achabou and Dekhili, 2013; Caniato et al., 2012; Laitala and Boks, 2012; Cervellon et al., 2010; Laitala and Boks, 2012; Goworek et al., 2012; Connell, 2010; Morgan and Birtwistle, 2009; Hustvedt and Dickson, 2009; Allwood et al., 2008; D'Souza et al., 2007; Joergens, 2006; Novak and Biocca, 2003; Jacoby et al., 1977.
Emotion and Sustainable Consumer Behaviour	Habib et al., 2023; Haj-Salem et al., 2022; Lu et al., 2020; Lu et al., 2020; Odou and Schill, 2020; Dong et al., 2019,2020, 2022; Aagerup, Frank, and Hultqvist, 2019; Wang et al., 2017; Rezvani et al., 2017; Sun and Trudel, 2017; Wang and Wu, 2016; Gonçalves, Lourenço, and Silva, 2016; Piff et al., 2015; Chen, 2015; Antonetti

Constructs	Literature
	and Maklan, 2014a, b; Onwezen et al., 2014; Han et al., 2014; Onwezen et al., 2013; Peloza et al., 2013; Jang et al., 2013; Onwezen et al., 2013; Han and Ryu, 2012; Van Zomeren et al., 2010; Corral-Verdugo et al., 2009; Kidwell et al., 2008; Bamberg and Möser, 2007; Kaiser, 2006; Perugini and Bagozzi, 2001; Nerb and Spada, 2001; Oskamp, 2000; Pooley and O'Conner, 2000; Lee and Holden, 1999; Shiv and Fedorikhin, 1999.
Love as an Emotion	Kautish et al., 2022; Dong et al., 2020; Kim and Hatfield, 2004; Wang et al., 2004; Ahuvia,1993, 2005a, 2005b; Regan et al., 1998; Fournier, 1998; Aaker, 1997; Aron et al., 1991; Hatfield and Rapson, 1987; Sternberg,1986, 1997; Fehr, 1988; Shimp and Madden, 1988; Hendrick, Hendrick and Adler,1988; Rubin, 1970.
Man-Nature Orientation Value	Afridi et al., 2021; Sreen et al., 2018; Chekima et al., 2016; Minton et al., 2015; Liang and Chaipoopirutana, 2014; Kala and Sharma, 2010; Lages and Fernandes, 2005; Jandt, 2004; Schwartz and Bardi, 2001; Chan, 2001; Schultz and Zelezny, 1998; Stern and Dietz, 1994; Stern and Dietz, 1994; Vinson et al., 1977; Kluckhohn and Strodtbeck, 1961.
Connectedness to Nature	Apaolaza et al., 2022; Otto et al., 2021; Neaman et al., 2021; Whitburn et al., 2020; Jaiswal and Bihari, 2020; Jaiswal, 2020; Whitburn et al., 2019; Mackay and Schmitt, 2019; Klassen, 2010; Davis et al., 2009; Otto and Pensini, 2007; Mayer and Frantz, 2004; Schultz, 2002.
Perceived Environmental Responsibility	Wang, Wang, et al., 2022; Perera, Kalantari Daronkola, and Johnson, 2022; Pristl et al., 2021; Taneja and Ali, 2021; Dangelico et al., 2021; Chen, 2020; Wu et al., 2020; Paco et al., 2019; Trivedi et al., 2018; Liobikienė and Bernatonienė, 2017; Paco et al., 2016; de Medeiros et al., 2016; Wang and Wu 2016; Attaran and Celik 2015; Kumar and Ghodeswar, 2015; White and Simpson, 2013;

Constructs	Literature
	Klockner 2013; Cleveland et al., 2012; Griskevicius et al., 2010; Lee, 2009; Moisander, 2007; Nyborg et al. 2006; Allen and Ferrand, 1999.
Anthropomorphism	van Esch et al., 2019; Tuškej and Podnar, 2018; MacInnis and Folkes, 2017; Severson and Lemm, 2016; Hur, Koo, and Hofmann, 2015; May and Monga, 2014; Tam et al., 2013; Culley and Madhavan, 2013; Hart et al., 2013; Tapus et al., 2012; Bickmore et al., 2010; Windhager et al., 2008, 2010; Delbaere et al. 2011; Landwehr, McGill and Herrmann, 2011; Chandler and Schwarz, 2010; Waytz et al., 2010; Gong, 2008; Windhager et al., 2008; Labroo et al., 2008; Baylor, 2009; Bartneck et al., 2009; Epley et al., 2008; Aggarwal and McGill, 2007; Epley, Waytz and Cacioppo 2007; Bickmore et al., 2005; Dalton, 2003; Leyens et al., 2003; Kiesler and Goetz, 2002; Mondloch et al., 1999; Caporael and Heyes, 1997; Mithen and Boyer, 1996; Reeves and Nasa, 1996; Mithen and Boyer, 1996; Bates, 1994; Hatano and Inagaki, 1994; Gurthie,1993; Cheney, 1992; Fisher, 1991; Marshack, 1990; Inagaki and Sugiyama, 1988; Gilmore, 1919.
Anthropomorphism of Nature	Yang et al., 2023; Wu et al., 2023; Pensini et al., 2022; Seth and Ketron, 2020; Ketron and Naletelich, 2019, Chang, Huang and Liu, 2018; Tam, 2014; Ahn et al., 2014; Tam et al., 2013; Tam 2013b; Clayton et al. 2011; Batson, 2011; Norenzayan, Hansen, and Cady, 2008; Kwan and Fiske, 2008; Atran et al., 2002.

Appendix IV Measurement Scales for Constructs used in the Questionnaire.

Variable	Item	Source
Man-Nature Orientation	It is important for me to understand the ways of nature and act accordingly.	Chan, 2001
	I should maintain harmony with nature.	
	Human beings are the master of the world and they are entitled to deploy any	

Variable	Item	Source
	of the natural resources they like (*reverse coded*).	
	Human beings are only part of nature (*reverse coded*).	
Anthropomorphism of Nature	Nature has intentions.	Tam et al., 2013
	Nature has free will.	
	Nature experiences emotions.	
	Nature has a consciousness.	
	Nature has a mind of its own.	
Perceived Environmental Responsibility	I should be responsible for protecting our environment.	Lee, 2009
	Environmental protection is the responsibility of the government, not me (*reverse coded*).	
	Environmental protection is the responsibility of environmental organizations, not mine (*reverse coded*).	
	I have taken responsibility for environmental protection since I was young.	
Connectedness to Nature	I often feel a sense of oneness with the natural world around me.	Apaolaza et al., 2022
	I often feel part of the web of life.	
	Like a tree can be part of a forest, I feel embedded within the broader natural world.	
	I often feel a kinship with animals and plants.	
	I think of the natural world as a community to which I belong.	
	My personal welfare is independent of the welfare of the natural	

Variable	Item	Source
	world. *(reverse-coded)*	
	I often feel disconnected from nature. *(reverse-coded)*	
Involvement with Apparel	Apparels are important to me.	Peng and Liang, 2019
	Apparels make me excited.	
	Apparels are interesting to me.	
	Apparels are needed for me	
	Apparels mean a lot to me	
	Apparels are fascinating to me.	
	Apparels are involving to me.	
Love of Nature	I cannot imagine anything else I own making me as happy as nature does.	Adapted from Dong, 2020
	Sometimes just seeing nature can be very exciting for me.	
	When I cannot be around nature, I find myself longing to see it.	
	The day I touched nature was a dream come true for me.	
	I know details about nature that are of little interest to most	
	I feel I really understand nature	
	I enjoy spending time in nature.	
	I am happy to share myself and my resources with nature.	
	I am always interested in learning more about nature	
	I would like to always keep in touch with nature.	
	I can't imagine leaving nature.	
	Nature cannot be replaced.	
Subjective Norms	My interaction with people would influence me to buy environmentally	Adapted from Sreen et

Variable	Item	Source
	sustainable apparel.	al., 2018
	People important to me think that I should purchase environmentally sustainable apparel.	
	My acquaintances would approve of my decision to buy environmentally sustainable apparel.	
	If I bought environmentally sustainable apparel, it would be consistent with the trend of social development.	
Attitude towards behaviour	Using apparels in an environmentally sustainable way is a good idea.	Kumar et al., 2017
	Applying the reduce, reuse and recycle concept on apparels is useful	
	Applying the reduce, reuse and recycle concept on apparels is responsible.	
	I like the idea of sustainable apparels instead of conventional apparels to contribute to environmental protection.	
Behavioural Intention towards Sustainable Apparels	I would buy apparels that are made up of recycled content	Rausch and Kopplin, 2021
	I will buy apparels which can be disposed of in an environmentally friendly manner	
	I will buy apparels that are safe for the environment	
	I will limit my use of that apparels which are made of or uses scarce resources	
	I will not buy new apparels if I already have previous dresses in a usable state	
	I will buy apparels which are produced in an environmentally friendly manner	

Appendix V Important Terminology used in SEM Technique

Terminology	Definitions
Reliability ***(Hair et al., 2013)***	*"Reliability refers to the overall consistency of a measure."*
Cronbach Alpha ***(Hair et al., 2013)***	*"Cronbach Alpha refers to all possible pairs of items contained within a set of items. It is a commonly used index of the internal consistency of a test and ranges in value from 0, indicating no internal consistency, to 1, indicating perfect internal consistency. Also called alpha coefficient; coefficient alpha."*
Validity ***(Saunders and Thornhill, 2003)***	*"Validity refers to the extent to which differences in observed scale scores reflect true differences among objects on the characteristics being measured rather than differences due to systematic or random errors".*
Content Validity ***(Hair et al., 2013)***	*"Content validity, also known as face validity, is a subjective assessment technique that is used to affirm the goodness of a research survey instrument."*
Construct validity ***(Hair et al., 2007)***	*"Construct validity refers to the degree to which a measure accurately represents the latent theoretical constructs that it is supposed to measure".*
Nomological Validity ***(Hair et al., 2007)***	*"Nomological validity refers to the degree that the summated scale makes accurate predictions of other concepts in a theoretically based model".*
Convergent Validity ***(Hair et al., 2007)***	*"Convergent validity refers to how closely the new scale is related to other variables and other measures of the same construct."*
Discriminant	*"Discriminant validity refers to the degree to which a test or*

Terminology	Definitions
Validity **(Henseler et al., 2015)**	*measure diverges from (i.e., does not correlate with) another measures whose underlying construct is conceptually unrelated to it.”*
Composite Reliability (Netemeyer, 2003; Fornell and Larcker, 1981)	*“Composite reliability is an indicator of the shared variance among the observed variables used as an indicator of a latent construct”.*
Average Variance Extracted (AVE) (Fornell and Larcker, 1981)	*“Average Variance Extracted is calculated as the mean-variance extracted for the items loading on a construct and is a summary indicator of convergence”.*
Common Method Bias (Podsakoff et al., 2003)	*“The variance in the responses due to the instrument and not because of the predilections of the respondents is known as the common method bias (CMB)”.*
Exploratory Factor Analysis (Anderson and Gerbing, 1988)	*“Exploratory factor analysis is a statistical technique that is used to reduce data to a smaller set of summary variables and to explore the underlying theoretical structure of the phenomena.”*
Confirmatory Factor Analysis (Anderson and Gerbing, 1988)	*“Confirmatory Factor Analysis specifies the posited relations of the observed variables to the underlying constructs, with the constructs allowed to intercorrelate freely.”*

Appendix VI Details of Important Model Fit Indices

Index	Abbreviation	Definition	Recommended Value
Chi-square	χ2	Chi-square is used as an absolute index of fit to test the model fit of the theoretical model.	P value < 0.05
Chained Multilateral Index Number per DF (Byrne, 2001)	χ2/Df	Chi-square is often sensitive to sample size. Chi-square divided by degree of freedom makes it less reliant on sample size. A value of 3 or less is acceptable as recommended by Kline (1998). The relative chi-square of the present model is 2.9.	3:1
Goodness of Fit Index	GFI	GFI has been compared to a squared multiple correlation.	Close to 1
Adjusted Goodness of Fit Index	AGFI	AGFI corresponds to the squared multiple correlation adjusted for degrees of freedom.	Close to 1 and less than GFI.
Comparative Fit Index *(Bentler, 1990)*	CFI	*"Comparative fit index compares the fit of a target model to the fit of an independent, or null, model"*	≥ 0.90
Normed Fit Index *(Steiger, 1990)*	NFI	NFI is given by the relative location of the current model between the saturated model and	0 and 1

Index	Abbreviation	Definition	Recommended Value
		the independence model.	
Tucker–Lewis Index *(Steiger, 1990)*	**TLI**	This is similar to NFI.	≥ 0.90
Root Mean Squared Error Approximation *(Steiger, 1990)*	**RMSEA**	RMSEA is an absolute fit index, in that it assesses how far a hypothesized model is from a perfect model.	$< .08$
Standardized Root Mean Square Residual *(Hu and Bentler, 1999)*	SRMR	SRMR is an absolute measure of fit SRMR decreases with an increase in sample size and parameters.	$< .08$
	PCLOSE	PCLOSE is the p-value for rejecting the null hypothesis that the model fits the individual subject's data	$< .05$

Appendix VII Skewness and Kurtosis

Construct Abbreviation	Skewness	Kurtosis
	Std Error – 0.432	**Std Error – 0.703**
MNO	-1.212	1.093
CN	-0.986	0.872
ATT	-1.129	1.452
SN	-0.821	0.732
PER	-1.287	1.423
LN	-0.992	0.912
BI	-1.231	1.512

Construct Abbreviation	Skewness	Kurtosis
	Std Error – 0.432	Std Error – 0.703
PAN	-1.286	1.098
PI	-1.035	0.981

Appendix VIII Final Factor Loadings

Dimensions	Factor Loading (>0.5)
MNO	
MNO1	.827
MNO2	.809
PER	
PER2	.814
PER3	.854
CN	
CN1	.743
CN2	.779
CN5	.777
CN6	.782
SN	
SN1	.701
SN2	.736
PAN	
PAN1	.867
PAN2	.852
PAN3	.875
PAN4	.906

Dimensions	Factor Loading (>0.5)
LN	
LNP1	.781
LNP2	.851
LNP3	.818
LNI1	.781
LNI2	.741
LNI3	.815
LNC1	.818
LNC2	.816
LNC3	.771
LNC4	.700
ATT	
ATT1	.800
ATT2	.765
ATT3	.802
ATT4	.716
BI	
BI1	.798
BI2	.839
BI3	.735
BI5	.720
PI	
PI1	.866
PI2	.921
PI3	.903
PI4	.775
PI5	.903
PI6	.921
PI7	.866

Dimensions	Factor Loading (>0.5)

Appendix IX Item-wise Factor Loading

Construct	No of the Items Dropped	Final Items	Factor Loading
MNO	2	MNO1	.854
		MNO2	.838
PER	2	PER2	.843
		PER3	.854
CN	3	CN1	.787
		CN2	.778
		CN5	.789
		CN6	.798
SN	2	SN1	.674
		SN2	.789
PAN	1	PAN1	.878
		PAN2	.869
		PAN3	.898
		PAN4	.910
LN	2	LNP1	.797
		LNP2	.876
		LNP3	.843
		LNI1	.798
		LNI2	.749
		LNI3	.872
		LNC1	.832
		LNC2	.832
		LNC3	.854
		LNC4	.789
ATT	-	ATT1	.821
		ATT2	.778
		ATT3	.854

Construct	No of the Items Dropped	Final Items	Factor Loading
		ATT4	.745
BI	1	BI1	.799
		BI2	.845
		BI3	.759
		BI5	.748
PI	-	PI1	.872
		PI2	.932
		PI3	.919
		PI4	.783
		PI5	.921
		PI6	.952
		PI7	.886

Appendix X Communalities of each Construct

Construct	Items	Communalities
MNO	MNO1	.669
	MNO2	.663
PER	PER2	.668
	PER3	.726
CN	CN1	.680
	CN2	.598
	CN5	.621
	CN6	.592
SN	SN1	.612
	SN2	.780
PAN	PAN1	.755
	PAN2	.731
	PAN3	.776
	PAN4	.820
LN	LNP1	.639

Construct	Items	Communalities
	LNP2	.667
	LNP3	.662
	LNI1	.684
	LNI2	.641
	LNI3	.590
	LNC1	.706
	LNC2	.738
	LNC3	.712
	LNC4	.736
ATT	ATT1	.542
	ATT2	.638
	ATT3	.567
	ATT4	.606
BI	BI1	.638
	BI2	.689
	BI3	.550
	BI5	.510
PI	PI1	.756
	PI2	.853
	PI3	.816
	PI4	.639
	PI5	.773
	PI6	.818
	PI7	.777

Appendix XI Model Fit Indices of Measurement Model

Model Fit Indices	Acronyms	Values
Chi-Square	$\chi 2$	1527.497
Degree of Freedom	DF	663
Chained Multilateral Index Number per	CMIN/DF	2.304

DF		
Goodness of Fit Index	GFI	0.968
Adjusted Goodness of Fit Index	AGFI	0.952
Comparative Fit Index	CFI	0.957
Normed Fit Index	NFI	0.909
Tucker–Lewis Index	TLI	0.931
Parsimony Normed Fit Index	PNFI	0.812
Parsimony-Adjusted CFI	PCFI	0.846
Root Mean Squared Error Approximation	RMSEA	0.045
	PCLOSE	0.936

Appendix XII Model Fit Indices of Structural Model

Model Fit Indices	Acronyms	Values
Chi-Square	$\chi 2$	1294.44
Degree of Freedom	DF	483
Chained Multilateral Index Number per DF	CMIN/DF	2.681
Goodness of Fit Index	GFI	0.954
Adjusted Goodness of Fit Index	AGFI	0.932
Comparative Fit Index	CFI	0.926
Normed Fit Index	NFI	0.927
Tucker–Lewis Index	TLI	0.917

Model Fit Indices	Acronyms	Values
Parsimony Normed Fit Index	PNFI	0.829
Parsimony-Adjusted CFI	PCFI	0.812
Root Mean Squared Error Approximation	RMSEA	0.065
	PCLOSE	0.921

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