



SWA+BHAAWA (NATURE): DEFINITION AND UNDERSTANDINGⁱ

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Abstract:

The amazing creation of nature is the result of millions of years of continuous existence. It tells a triumphant story about the adaptation of endangered species to a variety of environmental factors. Behind the natural phenomena that include all species such as animals, plants and planets is a dynamic invisible scene. This study explored the doctrine that underlies the active concept of nature. The need to understand what nature is in the long journey of discovering the definition of the concept of sustainability was the main motivation for this study. The objectives of the study were to 1. understand the concept of 'swabhawa dharma' or 'swabhawa' (nature) through pada vibhāṅgakarāṇaya' (word dissociation) method; 2. understand the concept of nature through synonyms; 3. understand the concept of nature through dictionary definitions; 4. understand the concept of nature through experts' opinions; 5. understand the concept of nature through the 'nirukthi' method; 6. understand the concept of nature through findings by scholars and 7. understand the concept of nature by identifying the elements of nature. The study used a descriptive analysis methodology and a '*sakaaya pada nirukthi*' method for data analysis. As the study data were available in the native language, that is, in Sinhala, the '*sakaaya pada nirukthi*' method was used as the most appropriate methodology. Given this study's nature, a novel technique called '*vida darshanaya*' was successfully used to

ⁱ ස්වභාව: නිර්වචනය සහ අවබෝධය

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implement this study's objectives. Finally, the study found that the concept of nature is mechanized on six components.

Keywords: definition of swabhaawa (nature); nature; 'sakaaya nirukthi'

සොබාදහම නැමති විස්මිත නිර්මාණය වසර මිලියන ගණනක අඛණ්ඩ පැවැත්මක ප්‍රතිඵලයකි. නොනැසී පවතින ජීව විශේෂයන් විවිධ පාරිසරික හේතූන්වලට අනුවර්තනය වීම පිළිබඳ ජයග්‍රාහී කතාවක් පවසා සිටී. සතුන්, ශාක හා ග්‍රහලෝක ආදී සියලු විශේෂ ඇතුළත් වන ස්වාභාවික සංසිද්ධි පිටුපස ඇත්තේ ගතික අදාශ්‍යමාන දර්ශනය කි. මෙම අධ්‍යයනය මඟින් සොබාදහමේ ක්‍රියාකාරී සංකල්පයට යටින් පවතින ධර්මතාව ගවේෂණය කරන ලදී. කිරසාරභාවය යන සංකල්පයේ නිර්වචනය සොයා ගැනීම නම් වූ දිගු ගමනේදී සොබාදහම යනු කුමක්දැයි තේරුම් ගැනීමේ අවශ්‍යතාව මෙම අධ්‍යයනය සඳහා වූ ප්‍රධාන පෙළඹවීම විය. ඒ අනුව, පද විභංගකරණ ක්‍රමය භාවිත කරමින් ස්වභාව ධර්මය/ ස්වභාව යන සංකල්පය අවබෝධ කර ගැනීම; ස්වභාව යන සංකල්පය සමාන පද ඔස්සේ අවබෝධ කර ගැනීම; ශබ්ද කෝෂ නිර්වචන තුළින් ස්වභාව යන සංකල්පය අවබෝධ කර ගැනීම; විශේෂඥ මතවාද භාවිත කරමින් ස්වභාව යන සංකල්පය අවබෝධ කර ගැනීම; විද්වතුන් කළ සොයාගැනීම් තුළින් ස්වභාව ධර්මය පිළිබඳ සංකල්පය අවබෝධ කර ගැනීම සහ සොබාදහමේ අංග හඳුනා ගැනීමෙන් සොබාදහමේ සංකල්පය අවබෝධ කර ගැනීම යන අරමුණු මෙම අධ්‍යයනය මඟින් සාක්ෂාත් කර ගැනීමට අපේක්ෂා කරන ලදී. අධ්‍යයනය සඳහා විස්තරාත්මක විශ්ලේෂණ ක්‍රමය සහ දත්ත විශ්ලේෂණය සඳහා සකාය පද නිරුක්ති ක්‍රමය භාවිත කර ඇත. අධ්‍යයනයට පදනම් වන දත්ත ස්වීය භාෂාවෙන් එනම් සිංහල භාෂාවෙන් තිබීම මත සකාය පද නිරුක්ති ක්‍රමය, වඩාත් උචිත ක්‍රමවේදය ලෙස භාවිත කරන ලදී. 'විද දර්ශනය' නැමති ක්‍රමවේදයක් ද අධ්‍යයනයේ අරමුණු සාක්ෂාත් කර ගැනීම සඳහා යොදා ගන්නා ලදී. අවසානාත්මක වශයෙන් සොබාදහම නැමති සංකල්පය සංරචක හයක් මත යාන්ත්‍රණය වන බව අධ්‍යයනයෙන් සොයා ගන්නා ලදී.

මූලා පද: ස්වභාව අර්ථ දැක්වීම, ස්වභාව ධර්මය, සකාය නිරුක්ති

1. Introduction

Survival of the fittest expresses nature's story of adaptation to various environmental causes (Claeys, 2000; Encyclopædia Britannica, 2021). In this paper, it is necessary to state that we treated the concepts 'nature' and 'nature *dharma*' equally. The theories of nature that have come up so far have led to the discovery of nature from very different angles. But Science has not yet been able to understand the whole or root of nature. Until a person fully understands nature, a person must act upon the developed ideas based on a person's rationale. Concepts developed with an inadequate or incomprehensible understanding of nature often result in dire consequences for all species.

There are cases in which the scientific findings, which are associated with more credibility as a specimen, are false. One is that Science describes nature to a certain extent. For example, Newton described how gravity happens in the general theory of relativity (Norton, 2020; Siegfried, 2015; Will, 2015), but he failed to tell why gravity happens. Fibonacci described nature's mathematical formula (Palazzo, 2016; Su, 2019), but he did not fully explain how the world was created in such a mathematical formula. The scientist who has yet to elaborate on the individual parts of the human being still struggles to explain why the human as a whole was formed. A scientist can understand 'nature' to some extent. It can be described in a descriptive, mathematical, or another way. But the scientist cannot effusively explain why some things happen in nature. On the other hand,

there are instances where such explanations became wrong. For example, Da Vinci's ape concept (Lombardero & Yllera, 2019) had to be abandoned; the mathematical concept of a square root of one number collapsed after the proof that a number has two square roots (Marecek, 2020). Such claims are not a science error. But that is the limit of Science. These examples show that it is impossible to fully grasp Nature's Nature through Science.

Similarly, such concepts can be developed in the social sciences as well. These concepts are built on a scientific basis based on data. Whether or not the concepts are accurate, social sciences data does not make the concepts 100% correct. Concepts to be verified, take years of research using data in a similar context. Sometimes it takes too long. Yet, such a long period would cause damage to society. Take the concept of development as an example. When the 'development' concept was introduced to the world, it was impossible to know whether the 'development' was right or wrong. Different interpretations have come up because of the inability to understand the meaning of 'development' correctly or because it is not well defined. Therefore, countries used the United Nations' (UN) definition for 'development'. The Gross Domestic Product (GDP) and GDP per capita are used to measure this development (United Nations, 2020). These criteria measure a country that adopts the UN definition for development. Accordingly, it is tended to label the countries as developed, developing and underdeveloped countries.

With the time some realized that there is an error in the original concept of development—the Human Development Index, which was introduced as a new criterion (United Nations Development Programme, 2020), as a solution. However, people realized that the definition of development did not meet its desired objectives. Then, other criteria called pleasure were used to indicate development (Wyhe, 2002). The country list's positional change based on the development-related categorization could be witnessed based on different criteria. But none could notice a decrease in global problems parallel to the changing definition of development. The humankind is not free from stress, either he/she is from a developed or non-developed country. The definition given for development is not complete. In this manner, even in the modern context, the concept of development that has gone on for decades is not sufficient to precisely measure a country's development. The world is still suffering the consequences of this misinterpretation for 'development'. For example, global warming, scarcity of resources, poverty and cultural breakdowns can be pointed out as the worst consequences of this 'development' definition. But there were limited indications that the academic community would engage in a decisive conversation to find whether development is a right concept or a misconception. The majority would still accept amendments to the definition of development as a viable concept. Accordingly, a new concept called 'sustainable' was finally added to development. At the United Nations level, we are working towards achieving sustainable development. Following that wish, sustainability has been defined as the expectation of developmental shortcomings to be permanently addressed. Continuous introduction of new concepts to overcome the shortcomings of a definition would become unstoppable unless the humankind is ready to understand *swabhaawa* (nature) appropriately.

Due to the inability to measure accuracy compared to a human-made concept with a shark-solid source, human has always had to follow the same orbicular system. But this method is very risky. This system can go on for generations. It is likely to be damaged. There is no other option but to associate this method with good. But this risky journey is not something we can overcome. That means that if you can adequately and appropriately understand nature, which is one of the world's longest-running repositories, you can escape this risky journey. That means we will be able to compare how much our concept conforms to the laws of nature. So, the first thing we need to do is understand nature properly, which is the purpose of this study. It is intended to serve six additional objectives such as: 1. understanding the concept of nature through '*pada vibhāṅgakarāṇaya*' (Word Dissociation) method; 2. understanding the concept of nature through synonyms; 3. understanding the meaning of nature through dictionary definitions; 4. understanding the concept of nature through the opinions provided by scholars; 5. understanding the concept of nature through '*nirukthi*' method; 6. understanding the concept of nature by identifying the elements of nature.

2. Data and Methods

The researchers had to advance in eastern knowledge school. Thus, this study is significantly more complicated. The study is beyond the norm of doubting the current norm while investigating the extent to which *swabhaawa* (nature) does not answer the fundamental question of 'why'. Therefore, the researchers were careful to apply very close theories to *swabhaawa* (nature) rather than the standard theories. This study's objectives were based on a simple but practical theory, which is suggested by us—the theory on the behavior of a student who studies a tree's root system. A person who studies the root system of a tree first cleanses the environment around that tree. Otherwise, the student will neither understand the surrounding nor see anything. Second, the tree's root system gains insight from the outside. Hence, the students must clean the tree's surrounding environment, which will be observed. Third, by digging into the root system, the student can gain the necessary knowledge. The same simple, practical method has been used to align our study's objectives. To understand nature or *swabhaawa* in the same terms, dictionary definitions, and expert opinions were used. That is like understanding the surroundings of a tree. Or to clean up the surroundings. Understanding the real definition of nature or *swabhaawa* is like understanding a tree by digging into the root system.

To understand the real definition of nature or *swabhaawa* is like understanding a tree by digging into the root system, the researchers used *muulashra* (Ministry of Culture, 1992, p. 695-96) or sources. *Muulashra* (*Mula+Aashra*) is known as gaining insight in relation to the root of something. In the Sinhala language, there are around 350 words associated with the term *muula* (Ministry of Culture, 1992, p.680). i.e. *Kushalamuula*, *Muula praccapti*, *muula*, *mul niyoogaya*, *muula kesha*, *muula drawya*, *muula gandhaya* and *muulikaya*. Besides, many words are in practice in the Sinhala language. For example, *ala giya mula giya than* (where the roots of the tubers went), *mula puranaawa* (initiate) (Ministry

of Culture, 1992, p.612), *mul piyawara* (the first step) (Ministry of Culture, 1992, p.621), *mul pan* or unaltered water (Ministry of Culture, 1992, p.620), *mul karanawa* (Prioritize) (Ministry of Culture, 1992, p.611), *mul guruthuma* (head-master) (Ministry of Culture, 1992, p.620), *mula hethu* (root causes) (Ministry of Culture, 1992, p.611), *mul mudala* (capital) (Ministry of Culture, 1992, p.622), and *mul putuwa* (the head chair) (Ministry of Culture, 1992, p.621). Another philosophy source is called *Tripitaka* (Ministry of Culture, 1985) or the three sources of wisdom, which is unique to *Hela* people (Yule et al., 2013). The three sources of wisdom are the *rukka muula*, *aaranya* and *shrunyagaara* (Buddhist Cultural Center, 2013). Considering all this, we used the *Hela Gnana* approach to accomplish this study's objectives. This approach is quite different from the Western thinking approach, and therefore many may not validate this framework. But since the philosophy of cognition is always superior to the Science that it claims to be and provides theories for Science, it is necessary to look at this logic with understanding. This technique is based on the theory of *vida darshanaya*. The study is not about a general point of view. Everyone can see something on the surface. If somebody wishes to see something beyond the standard framework that everyone sees, you need to look at it beyond that is not commonly seen or displayed on a video. This simple theory has been applied in this study.

For the first, second, third and fourth objectives, we used online dictionaries and online encyclopedia. We decided to select a panel of scholarly opinions through websites randomly. To achieve the fifth objective, we used *sakaaya nirukthi*, the defining Science of *Hela* people (Hela Bodu Piyuma, 2013). Also, it should be noted that when interpreting the texts, they have been first studied in *Sinhala* and then translated into English. The basis for this is the methodology is shown in figure 1. This figure shows how the researchers adopted different methods to achieve each study's objective.

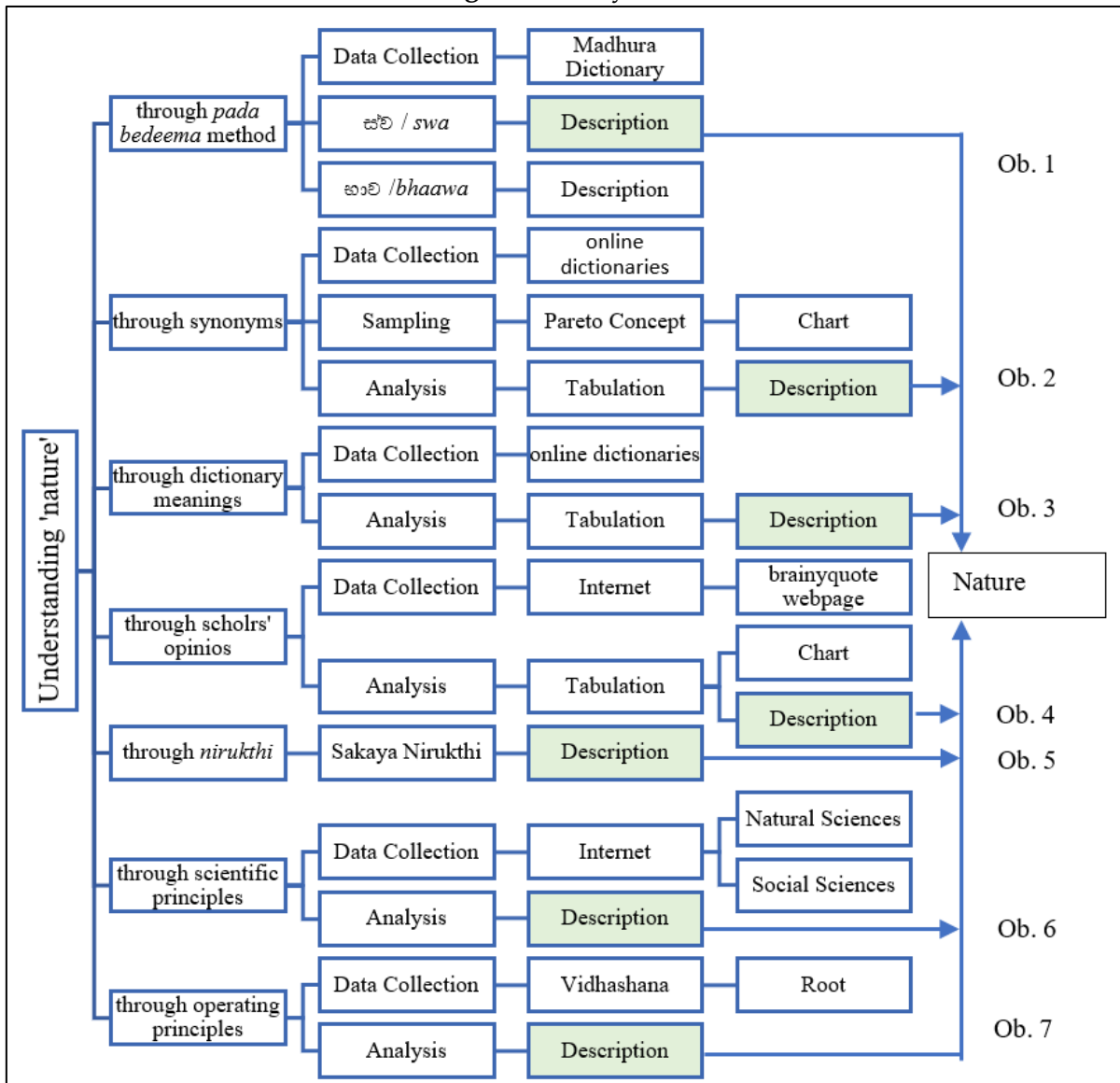
2.1 Data Analysis

This study's data analysis has been carried out separately to make each method more explicit. Accordingly, 'Swabhawa' (nature) is first described using the decomposition of the *pada vibangakarana* method.

A. Understanding 'swabhawa' (Nature) through *pada vibangakarana* method

The word '*swabhawa*' can be divided into '*swa*' and '*bhawa*'. There can be three English words for the word '*swa*'. Those words are 'self', 'natural' and 'auto' (Kulatunga, 2020). In Sinhala, the direct translations of those words are ස්වයං/ *swayan*, ඉබේ/ *ibe*, සිය/ *siya*; මෝටර්පථය/ *motorathaya*. The English term 'auto' is described in Sinhala as '*swayanbhuu*' (Kulatunga, 2020). And the word ස්වයං (*swayan*) also provides a translation into English as 'self' (Kulatunga, 2020). For the word 'self', there are many Sinhala translations such as '*sayan*', '*sweeya*', '*siya*', '*aathma*', '*aathmaya*', '*aathmarthaya*', '*thama*', '*swa*', '*swayan*', '*swakeeya*', '*ibe*', '*swayanbhuu*', '*asmithaa*' and '*asmithawa*' (Kulatunga, 2020). There are Sinhala translations such as '*swa*' and '*swayan*' for the word 'auto' (Kulatunga, 2020).

Figure 1: Study Plan



(Source: Developed by the researchers, 2020.)

There are three English words, such as 'abstract', 'status' and 'meaning' for the Sinhala word *bhaawa* (Kulatunga, 2020). There are Sinhala translations such as '*wisanyuththa*', '*wiyuktha*', '*keewala*' and '*saaraya*' for the word 'abstract' (Kulatunga, 2020). For the word 'status', there are Sinhala translations such as '*sthithiya*', '*aithiya*', '*tharaathirama*', '*tharamathirama*', '*thathwaya*', and also for the word 'meening, there are Sinhala translations such as. '*Theruama*', '*adahasa*', '*arthaya*', '*abhipraaya*', '*chaayaawa*' and '*bhaawaya*' ((Kulatunga, 2020). There are ten selected meanings from '*swa*' and five selected meanings from '*bhaawa*' (Kulatunga, 2020). Thus, it is possible to create 50 terms (10 x 5) that describe '*swabhaawa*; (nature). Accordingly, the following words can be created. '*Swayan Wisanyuktha*', '*swayan wiyuktha*', '*swayan saaraya*', '*swayanthathwaya*', '*swayan abhipraaya*', '*ibee wisanyuktha*', '*ibee wiyuktha*', '*ibee saaraya*', '*ibee thathwaya*', '*ibee abhipraaya*', '*thama wisinma wisanyuktha*', '*thama wisinma wiyuktha*', '*thama wisinma saaraya*', '*thama wisinma thathwaya*', '*thama wisinma abhipraaya*', '*swayanbhuu wisanyuktha*,

'swaynbuu wiyuktha', 'swaynbhuu saaraya', 'swaynbhuu thathwaya', 'swayanbhuu abhipraaya', 'sweeya wisanyuktha', 'sweeya wiyuktha', 'sweeya saaraya', 'sweeya abhipraaya', 'aathma wisanyuktha', 'aathma wiyuktha', 'aathma saaraya', 'aathma abhipraaya', 'swakeeya wisanyuktha', 'swakeeya wiyuktha', 'swakeeya saaraya', 'swakeeya abhipraaya', 'thama wisanyuktha', 'thama wiyuktha', 'thama saaraya', 'thama abhipraaya', 'theme wisanyuktha', 'theme wiyuktha', 'theme saaraya', 'theme abhipraaya' and 'aathmaarthaya'.

It is clear that merely combining these two verses does not directly help to understand the concept 'swabhaawa' (Nature). To understand 'swabhaawa' better, we need to look at the meaning of all the terms used to describe 'swabhaawa'. Therefore, it is important to analyze the terms used in the sense of 'sayan', 'sweeya', 'siya', 'aathma', 'aathmaya', 'aathmarthaya', 'thama', 'swa', 'swayan', 'swakeeya', 'ibe', 'swayanbhuu', 'asmithaa' and 'asmithawa'. Further, it seems more reasonable to assume that the generality of 'swa' is something that happens without the protection or support of another. It means that it has the power to do or happen by itself. It is not difficult to find common words to understand the concept of 'bhaawa'. The terms used for 'bhaawa' such as 'wisanyuththa', 'wiyuktha', and 'saaraya' seemed to be common in meaning (Kulatunga, 2020). That is a state of being with not being related to another. Accordingly, 'swabhaawa' is a state of being with not being related to another and without the protection or support. Or 'swabhaawa' is an energy/ state of energy produced by itself without any external influence.

B. Understanding 'Swabhaawa' (Nature) through Synonyms

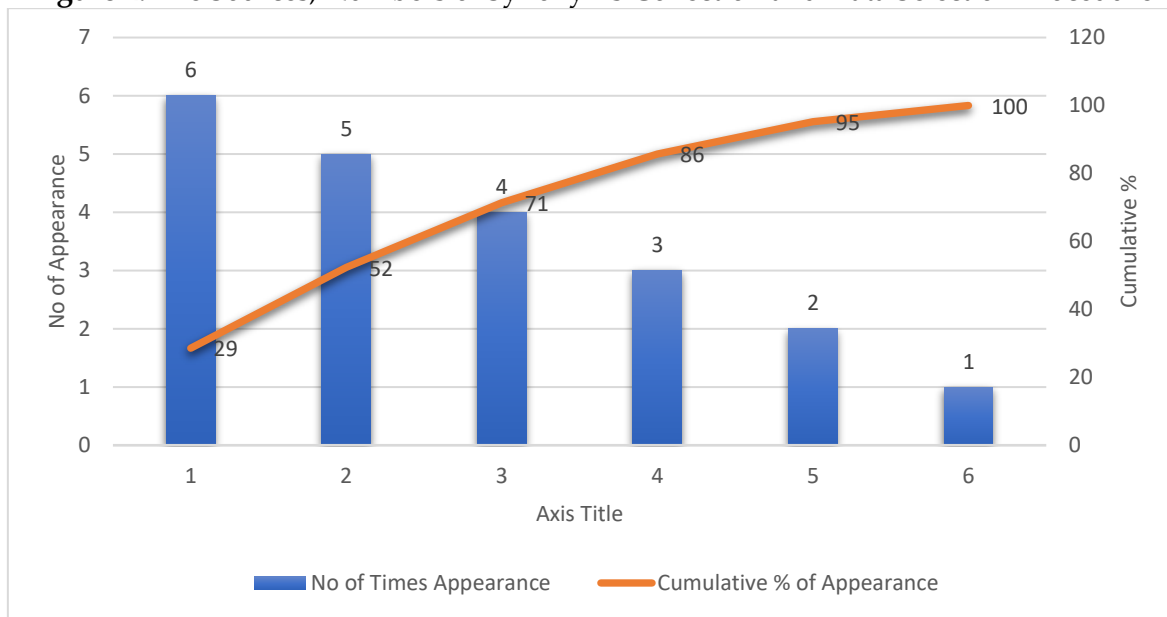
We analyzed synonyms to understand 'swabhaawa'. The synonyms used to describe 'Swabhawa' for this analysis were selected under three stages: 1. Gathering of data under seven sources. 2. Select the terms used in the study using the synonyms list. 3. Trying to identify the concept of 'swabhaawa' through these selected synonyms through investigation. The summaries for Phases 1 and 2 are shown in Table 1 and how the synonyms were selected with 80% weight are shown in Figure 2. According to Table 1, 243 synonyms for nature were obtained from the sources 27, 32, 39, 49, 25, 37, and 34, respectively, from the sources MS Word, Thesaurus, Collins dictionary, Webster, Synonyms, Macmillan thesaurus, and Reverse. However, it was observed that 75 of these 243 terms have no equal value as they are derived from only one data source. Accordingly, to select the most weighty synonyms, those synonyms were weighed according to the number of sources included. In that respect, there were no synonyms displayed in all seven sources, and only 1 to 6 appearances were observed. Accordingly, measures were taken to select a maximum of 6 weights and a minimum of 1 weight covering 72% of the terms. A summary of these data is given in Table 1.

Table 1: The Sources, Numbers of Synonyms Collection and Data Selection Procedure

| Basic Data | | | Data Selection | | | |
|--------------|--|----------------|----------------|------------------------|--------------------------------|----------------------------|
| S/N | Source | No of Synonyms | S/N | No of Times Appearance | Cumulative Value of Appearance | Cumulative % of Appearance |
| 01 | Ms Word | 27 | 01 | 6 | 06 | 29 |
| 02 | thesaurus (Dictionary.com, 2021c) | 32 | 02 | 5 | 11 | 52 |
| 03 | Collins dictionary (Collins, 2021c) | 39 | 03 | 4 | 15 | 71 |
| 04 | webster.com (Merriam-Webster, 2021e) | 49 | 04 | 3 | 18 | 86 |
| 05 | synonyms.com (STANDS4 LLC, 2021) | 25 | 05 | 2 | 20 | 95 |
| 06 | Macmillan thesaurus (Macmillan Education Limited, 2021) | 37 | 06 | 1 | 21 | 100 |
| 07 | reverso.net (Reverso-Softissimo, 2021a) | 34 | | 21 | | |
| Total | | 243 | | | | |

Data Source: Collins, 2021b; Dictionary.com, 2021b; Macmillan Education Limited, 2021; Merriam-Webster, 2021b; Reverso-Softissimo, 2021; STANDS4 LLC, 2021.

Figure 2: The Sources, Numbers of Synonyms Collection and Data Selection Procedure



(Source: Developed by the researchers, 2021.)

Figure 2 shows the number of terms to be selected to cover 71% of the weight of the synonyms considered. Accordingly, only the equivalents of the numbers 1, 2, and 3, which covered the percentage values of 29, 52, and 71, were analyzed in this study. Serial numbers 1, 2, and 3 are the same synonyms displayed 6, 5, and 4 times in the sources, respectively. Accordingly, six out of the seven sources considered displayed the synonyms of quality, sort, temperament and type. In addition, 12 synonyms of Character,

Complexion, Constitution, Description, Disposition, Essence, Features, Humor, Kind, Makeup, Personality, Temper from five sources were displayed. Finally, the nine synonyms Being, Cosmos, Creation, Environment, Mood, Species, Universe, Variety, and World were included in four sources.

When analyzing the synonyms of Table 2, we realized that the synonyms received for the term 'nature' could be categorized into three. Those are synonyms related to people and people's behaviour, synonyms related to non-living things and behaviour of non-living things and synonyms related to both living and non-living.

Table 2: Definitions of Selected Synonyms for Nature

| S/N | Synonyms | Reference | Description |
|-----|--------------|--|--|
| 01 | Quality | cambridge.org (Reverso-Softissimo, 2021b) | How good or bad something is |
| | | | A characteristic or feature of someone or something |
| 02 | Sort | merriam-webster (Merriam-Webster, 2021g) | Method or manner of acting |
| 03 | Temperament | merriam-webster (Merriam-Webster, 2021i) | The act or process of tempering or modifying |
| 04 | Type | cambridge.org (Cambridge University Press, 2021l) | A particular group of people or things that share similar characteristics and form a smaller division of a larger set |
| 05 | Character | cambridge.org (Cambridge University Press, 2021b) | The particular combination of qualities in a person or place that makes them different from others |
| 06 | Complexion | collinsdictionary (Collins, 2021a) | The character of a person or place consists of all the qualities they have that make them distinct from other people or places |
| 07 | Constitution | cambridge.org (Cambridge University Press, 2021c) | How something is made up of different parts |
| 08 | Description | ldoceonline.com (Pearson, 2021) | A piece of writing or speech that gives details about what someone or something is like |
| 09 | Disposition | cambridge.org (Cambridge University Press, 2021e) | A natural tendency to do something, or to have or develop something: |
| 10 | Essence | merriam-webster (Merriam-Webster, 2021a) | The individual, real, or ultimate nature of a thing especially as opposed to its existence |
| 11 | Features | cambridge.org (Cambridge University Press, 2021g) | A typical quality or an important part of something |
| 12 | Humor | cambridge.org (Cambridge University Press, 2021h) | The ability to find things funny, the way in which people see that some things are funny, or the quality of being funny: |
| 13 | Kind | merriam-webster (Merriam-Webster, 2021b) | A specific or recognized variety |
| 14 | Makeup | cambridge.org (Cambridge University Press, 2021i) | Colored substances used on your face to improve or change your appearance |
| 15 | Personality | merriam-webster (Merriam-Webster, 2021f) | A set of distinctive traits and characteristics |

| | | | |
|----|-------------|---|--|
| 16 | Temper | merriam-webster (Merriam-Webster, 2021h) | Heat of mind or emotion: proneness to anger |
| 17 | Being | cambridge.org (Cambridge University Press, 2021a) | A person or thing that exists |
| 18 | Cosmos | dictionary.com (Dictionary.com, 2021a) | The world or universe regarded as an orderly, harmonious system. |
| 19 | Creation | cambridge.org (Cambridge University Press, 2021d) | The act of creating something, or the thing that is created |
| 20 | Environment | cambridge.org (Cambridge University Press, 2021f) | The air, water and land in or on which people, animals, and plant live |
| 21 | Mood | merriam-webster (Merriam-Webster, 2021c) | A conscious state of mind or predominant emotion |
| 22 | Species | cambridge.org (Cambridge University Press, 2021k) | A set of animals or plants in which the members have similar characteristics to each other and can breed with each other |
| 23 | Universe | merriam-webster (Merriam-Webster, 2021j) | the whole body of things and phenomena observed or postulated : COSMOS |
| 24 | Variety | cambridge.org (Cambridge University Press, 2021m) | The characteristic of often changing and being different |
| 25 | World | cambridge.org (Cambridge University Press, 2021n) | The earth and all the people, places, and things on it |

Source: Cambridge University Press, 2021g, 2021n, 2021a, 2021d, 2021k, 2021b, 2021f, 2021c, 2021m, 2021e, 2021l, 2021h, 2021i; Collins, 2021a; Dictionary.com, 2021a; Merriam-Webster, 2021h, 2021g, 2021i, 2021j, 2021a, 2021c, 2021f, 2021b; Pearson, 2021; Reverso-Softissimo, 2021b

C. Understanding the Concept of Nature through Descriptions Provided in Dictionaries

As for the third objective, we tried to understand '*swabhaawa*' (nature) through the dictionary's meanings. We have associated seven online dictionaries that are commonly used (Cambridge University Press, 2021; Collins, 2021; Dictionary.com, 2021a; Lexico.com, 2021; Merriam-Webster, 2021; yourdictionary.com, 2021). There were thirteen instances found, and a summary of the information obtained is given in Table 3.

Table 3: Meaning of 'Nature' According to Dictionaries

| s/n | Reference | Description | Main Idea | |
|-----|---|--|--------------------------------|--------------------------------|
| 01 | Collins English Dictionary (Collins, 2021b) | "the fundamental qualities of a person or thing; identity or essential character", "disposition or temperament", "tendencies, desires, or instincts governing behavior", | qualities of a person or thing | qualities of a person or thing |
| 02 | Webster's New World College Dictionary (Collins, 2021b) | The essential character of a thing; quality or qualities that make something what it is; essence, inborn character; innate | character of a thing or person | |

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| | | disposition; inherent tendencies of a person, the power, force, principle, etc. that seems to regulate the physical universe | | |
| 03 | Cambridge Academic Content Dictionary (Cambridge University Press, 2021j) | The force that is responsible for physical life is often called nature, and is sometimes spoken of as a person, The type or main characteristic (of something) | responsible for physical life | |
| 04 | Oxford Dictionaries (Lexico.com, 2021) | The physical force regarded as causing and regulating the phenomena of the world., The basic or inherent features, character, or qualities of something. ' <i>helping them to realize the nature of their problems</i> ', Inborn or hereditary characteristics as an influence on or determinant of personality., The innate or essential qualities or character of a person or animal. ' <i>it's not in her nature to listen to advice</i> ' | causing and regulating the phenomena of the world | causing and regulating the phenomena of the world |
| | | | qualities of something | qualities of a person or thing |
| 05 | Merriam-Webster dictionary (Merriam-Webster, 2021d) | The inherent character or basic constitution of a person or thing, a creative and controlling force in the universe, the genetically controlled qualities of an organism, the external world in its entirety | character or basic constitution of a person or thing | |
| 06 | Nature dictionary definition (yourdictionary.com, 2021) | In this respect <i>nature</i> is defined as the <i>natural</i> earth and the things on it, or the essence of a person or thing. The trees, forests, birds and animals are all an example of <i>Nature</i> | <i>natural</i> Earth and the things on it, | |
| 07 | Dictionary browse (Dictionary.com, 2021b) | The elements of the natural world, as mountains, trees, animals, or rivers | elements of the natural world | elements of the natural world |
| 08 | Webster's New World College Dictionary (Collins, 2021b) | Natural scenery, including the plants and animals that are part of it, the sum total of all things in time and space; the entire physical universe | natural scenery | |
| 09 | Collins English Dictionary (Collins, 2021b) | The whole system of the existence, arrangement, forces, and events of all physical life that are not controlled by man, all natural phenomena and plant and animal life, as distinct from human beings and their creations, a wild primitive state untouched by man or civilization, natural un-spoilt scenery or countryside | distinct from human beings and their creations, | relation with man |
| 10 | Webster's New World College Dictionary (Collins, 2021b) | Any or all of the instincts, desires, appetites, drives, etc. of a person or animal, what is regarded as normal or acceptable behavior, the | any or all of the instincts, desires, appetites, drives | |

| | | | | |
|----|---|--|--|--|
| | | primitive state of man a simple way of life close to or in the outdoors, affectionate or kindly feeling | | |
| 11 | Cambridge Academic Content Dictionary (Cambridge University Press, 2021j) | All the animals and plants in the world and all the features, forces, and processes that exist or happen independently of people, such as the weather, the sea, mountains, reproduction, and growth; The character of a person, or the characteristics a person is born with | happen independently of people | |
| 12 | Oxford Dictionaries (Lexico.com, 2021) | The phenomena of the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations., The innate or essential qualities or character of a person or animal. 'it's not in her nature to listen to advice' | products of the earth, as opposed to humans or human creations | |
| 13 | Dictionary browse (Dictionary.com, 2021b) | The material world, especially as surrounding humankind and existing independently of human activities., The natural world as it exists without human beings or civilization: In nature, wild dogs hunt in packs | The material world, independently of human activities | |

Source: Cambridge University Press, 2021; Collins, 2021; Dictionary.com, 2021a; Lexico.com, 2021; Merriam-Webster, 2021; yourdictionary.com, 2021.

According to the meanings' main idea, we developed the first classification. In this classification, some meanings showed different similar features. Therefore, we did a second classification again. Through this classification, we were able to identify dictionaries' meanings of '*swabhaawa*' (nature). These meanings were either 1. qualities of a person or thing, 2. causing and regulating the world's phenomena, 3. elements of the natural world or 4. relationship with the human. The first type of interpretation identified here made it clear that there are definitions in dictionaries that highlight the fact that there is a certain quality in nature doctrine. When there is a term called 'quality', there is always room for increasing quality. The fact that we have the virtue of a person or something also means that they are also knowledge passed down from generation to generation. The second categorization also gives a profound idea. The definitions given under that classification make it clear that nature is the world's governing authority. However, the definitions given by the third and fourth classifications do not provide a better understanding of what nature is. Those seeking to give an idea of the relationship between man and the environment do not define what nature is. Those definitions did not make enough effort to interpret nature. They were trying to name the elements of nature or explain the relationship between man and nature.

D. Understanding *Swabhawa* (nature) through Experts' Opinions

In the study of *swabhawa* or Nature, we analyzed the views expressed by 51 scholars. The views expressed by experts in various fields through the brainyqutoe website have been investigated (Table 4).

Table 4: Experts' Opinions About Nature

| SN | Expert | Description | Main Idea |
|----|------------------------|--|---------------------------------|
| 01 | Albert Einstein | Look deep into nature, and then you will understand everything better. | can learn a lot from the Nature |
| 02 | Frank Lloyd Wright | Study nature , love nature, stay close to nature. It will never fail you. | |
| 03 | Mother Teresa | We need to find God, and he cannot be found in noise and restlessness. God is the friend of silence. See how nature - trees, flowers, grass- grows in silence; see the stars, the moon and the sun, how they move in silence... We need silence to be able to touch souls. | |
| 04 | Margaret Fuller | Nature provides exceptions to every rule. | |
| 05 | Vladimir Nabokov | The breaking of a wave cannot explain the whole sea. | |
| 06 | Josiah Gilbert Holland | Nature is the master of talents; genius is the master of nature. | |
| 07 | John Muir | The clearest way into the Universe is through a forest wilderness. | |
| 08 | John Lubbock | Earth and sky, woods and fields, lakes and rivers, the mountain and the sea, are excellent schoolmasters, and teach some of us more than we can ever learn from books. | |
| 09 | Hans Hofmann | In nature, light creates the color. In the picture, color creates the light. | |
| 10 | Eleonora Duse | If the sight of the blue skies fills you with joy, if a blade of grass springing up in the fields has power to move you, if the simple things of nature have a message that you understand, rejoice, for your soul is alive. | |
| 11 | Theodore Roethke | Over every mountain there is a path, although it may not be seen from the valley. | |
| 12 | Paul Cezanne | The truth is in nature, and I shall prove it. | |
| 13 | Isaac Newton | to explain all nature is too difficult a task for any one man or even for any one age. 'This much better to do a little with certainty & leave the rest for others that come after you. | |
| 14 | Bhumibol Adulyadej | Nature is something outside our body, but the mind is within us. | |
| 15 | Niels Bohr | It is wrong to think that the task of physics is to find out how nature is. Physics concerns what we say about nature. | |
| 16 | Christopher Heyerdahl | Mother Nature is the great equalizer. You can't get away from it. | |
| 17 | Aristotle | Nature does nothing in vain. | |
| 18 | Robert Green Ingersoll | In nature there are neither rewards nor punishments; there are consequences. | |
| 19 | Nikola Tesla | The history of Science shows that theories are perishable. With every new truth that is revealed we get a better understanding of nature and our conceptions and views are modified. | |
| 20 | Paracelsus | The art of healing comes from nature, not from the physician. Therefore, the physician must start from nature, with an open mind. | |
| 21 | Leonardo da Vinci | Nature is the source of all true knowledge. She has her own logic, her own laws, she has no effect without cause nor invention without necessity. | |
| 22 | William Wordsworth | Come forth into the light of things, let nature be your teacher | |

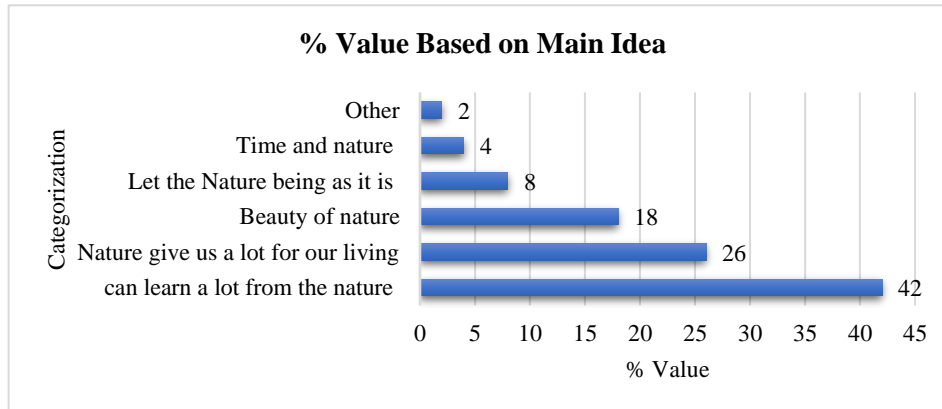
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| | | | |
|----|----------------------------|--|-------------------------------------|
| 23 | Hans Christian Andersen | Just living is not enough... one must have sunshine, freedom, and a little flower. | Nature give us a lot for our living |
| 24 | John Muir | In every walk with Nature one receives far more than he seeks. | |
| 25 | Ralph Waldo Emerson | Nature always wears the colors of the spirit. | |
| 26 | Gerard De Nerval | Every flower is a soul blossoming in nature. | |
| 27 | Jane Austen | To sit in the shade on a fine day and look upon verdure is the most perfect refreshment. | |
| 28 | John Muir | Keep close to nature's heart... and break clear away, once in a while, and climb a mountain or spend a week in the woods. Wash your spirit clean. | |
| 29 | John Updike | Rain is grace; rain is the sky descending to the earth; without rain, there would be no life. | |
| 30 | John Lubbock | Rest is not idleness, and to lie sometimes on the grass under trees on a summer's day, listening to the murmur of the water, or watching the clouds float across the sky, is by no means a waste of time | |
| 31 | John Ruskin | Sunshine is delicious, rain is refreshing, wind braces us up, snow is exhilarating; there is really no such thing as bad weather, only different kinds of good weather. | |
| 32 | Joseph Campbell | The goal of life is to make your heartbeat match the beat of the universe, to match your Nature with Nature. | |
| 33 | E. O. Wilson | Nature holds the key to our aesthetic, intellectual, cognitive and even spiritual satisfaction. | |
| 34 | Edward Abbey | Wilderness is not a luxury but a necessity of the human spirit. | |
| 35 | Lucius Annaeus Seneca | A happy life is one which is in accordance with its own nature. | |
| 36 | Henry Wadsworth Longfellow | The best thing one can do when it's raining is to let it rain. | |
| 37 | William Shakespeare | One touch of nature makes the whole world kin. | |
| 38 | Langston Hughes | Let the rain kiss you. Let the rain beat upon your head with silver liquid drops. Let the rain sing you a lullaby. | Time and Nature |
| 39 | Francis Bacon | We cannot command nature except by obeying her. | |
| 40 | Rabindranath Tagore | The butterfly counts not months but moments, and has time enough. | Beauty of Nature |
| 41 | Ralph Waldo Emerson | Every particular in nature, a leaf, a drop, a crystal, a moment of time is related to the whole, and partakes of the perfection of the whole. | |
| 42 | Leigh Hunt | Colors are the smiles of nature. | |
| 43 | Pat Buckley | I can find God in Nature, in animals, in birds and the environment | |
| 44 | Aristotle | In all things of nature there is something of the marvelous. | |
| 45 | Rabindranath Tagore | Trees are the earth's endless effort to speak to the listening heaven. | |
| 46 | Mattie Stepanek | Sunset is still my favorite color, and rainbow is second. | |
| 47 | John Joly | That the sea is one of the most beautiful and magnificent sights in nature, all admit. | |
| 48 | Alex Trebek | If you can't be in awe of Mother Nature, there's something wrong with you. | |
| 49 | Ralph Waldo Emerson | The earth laughs in flowers. | |
| 50 | Pedro Calderon de la Barca | Green is the prime color of the world, and that from which its loveliness arises. | Other |
| 51 | Aristotle | Man is by nature a political animal. | |

Source: BrainyQuote, 2021.

According to Table 5, it is clear that there were experts representing disciplines such as sciences and aesthetics in the sample. These experts were selected using a simple random technique. Based on the opinions of experts on 'nature' we could identify six categories such as descriptions emphasize that there is an ability to learn a lot from the nature, there is an ability of nature to give us a lot for our living, there is an ability to let the 'nature' to be as it is, there is time and 'nature', there is beauty of nature and other. Percentage of the ideas, which these 51 experts provided are shown in the following figure.

Figure 3: Expressions on Nature Categories Value Based on Main Idea



(Source: Developed by the Researchers based on Data Analysis, 2021)

According to Figure 3, there were 42% of opinions under the category 'there is an ability to learn a lot from the nature'. There were 26% of opinions representing the category 'there is an ability of nature to give us a lot for our living'. Under the category called 'there is an ability to let the 'nature'', there were 4% of ideas. There were 2% and 8% of opinions respectively under the category, 'there is time and 'nature'', and 'there is beauty of nature'. The category on 'other' had 2% of opinions.

Accordingly, it is clear that the first of the six categories, conveyed a general idea of the concept of nature. Experts think that nature is a place to learn, like a teacher. Their statements do not reveal that they have made any attempt to show that nature has any quality, but what kind of quality would be there beyond it. Similarly, it is clear that the nature of the views under the other five categories is incomprehensible. This is because they have tried to explain from the outside the nature of what they are trying to achieve. It is clear that one group is mainly trying to reveal the benefits of nature to humanity, while the other is of the view that it is the human endeavor to allow nature to have its fair share. Others seek to describe nature by describing its relationship to time and space, while the other aims at describing the beauty of nature and attempting to substitute the qualities of nature with the ordinary world. However, it is doubtful that any of them have been able to understand nature properly or to introduce nature properly.

5. Understand the *Swabhaawa* (Nature) According to *Nirukthi* Method

In addition, by examining the meaning of *swabhaawa* (Nature) in the *nirukthi* method, its meaning can be further nurtured. Therefore, when studying about nature, with *sakaaya nirukthi* method it is possible to retrieve the definition of the term itself. According to *sakaaya nirukthi* method *swabhaawa* (Nature) is consisted with three words called 'swa'+ 'aa'+ 'bhawa'. In other words, *swabhaawa* (Nature) is a result of 'swa', 'aa' and 'bhawa' causes. The result of 'swa', 'aa' and 'bhawa' causes is the *swabhaawa* (Nature). Therefore, it is possible to understand *swabhaawa* (Nature) by realizing the causes such as 'swa', 'aa' and 'bhawa'. 'Swa' is 'Thama' (self). 'Aa' is 'aapu' (came), 'pamini' (coming), 'aarambha wuu' (initiated) or 'hatagath' (born). And 'bhawa' is 'gathiya' (traits). Nature, therefore, is a 'characteristic of itself'. Or thus nature proves to be an inherent trait. Or the nature of existence, or that energy inherited from itself.

Thus, in terms of *sakaaya nirukthi*, it is established that nature is 'something that exists and functions by itself'.

6. Nature-Based Findings by Scholars

Since time immemorial, scholars have made many attempts to identify what nature is. As a result of their efforts, scholars have been able to formulate various principles, concepts and laws. Among such findings, this study focuses on six natural science laws and two social science concepts. They are the theory of biological evolution (Wyhe, 2002), law of universal gravitation (Mainzer, 2013), heliocentrism (Elert, 2021), special relativity (Khan Academy, 2021; Siegfried, 2015), and double helix-structure of DNA (Collins, n.d.; Kabai, 2007), Fibonacci sequence (Reich, 2020; Su, 2019), Marxism (Avineri, 1968; Wolff & Leopold, 2020) and globalization (The Levin Institute, 2020). The theory of biological revolution, was first proposed by the naturalist Charles Darwin (1809-1882) through his theory of evolution. He seeks to show that human evolution is based on natural selection (Claeys, 2000; Encyclopædia Britannica, 2021; Wyhe, 2002). Although natural selection is a fact that can be seen on the surface of living things, Charles Darwin did not explain the cause of natural selection. For the same reason, his theory contributes very little to understanding whether nature operates on the basis of any doctrine. Also, in Newton's theory of gravitation, it refers to the property of an object to be attracted to each other (Maxwell, 2020). Newton's law describes the gravitational pull of an object, but does not explain why such an attraction occurs. Nicholas Copernicus' (1473 -1543) heliocentrism (Iwanowska, 1973) shattered the geopolitics that had hitherto been accepted by society. Instead, he said, the solar system was centered on the sun (Iwanowska, 1973). By this theory of earth centrist he was able to describe the existing reality of nature. But he could not explain why that reality is the reality. Also in 1905, Albert Einstein proposed a theory called special relativity. This theory explained the relationship between speed, time and distance (Siegfried, 2015). He said that speed of the light remains the same regardless of how fast someone or something is moving toward or away from it. Again, Albert Einstein described the Nature of Nature, not the nature of the cause. The theory of the double

helix structure of DNA, presented by James Watson and Francis Crick, hinted at the nature of the world (Kabai, 2007). But they could not explain why such a nature of the DNA exist. The mathematical Nature of Nature is also described by Fibonacci (Palazzo, 2016; Su, 2019). By his rule we can understand how a tree divides its branches and how flower petals fall off. But Fibonacci did not provide an answer to the question of why nature behaves like that. Marx and Engels sought a solution to social conflict and the social class system (Avineri, 1968; Wolff & Leopold, 2020). Marxists also say that it is an attempt to provide for the class conflict. Engels and Marx used the two theories of materialist interpretation of historical development and dialectical view of social transformation. But these philosophers have not investigated what the dialectical Nature of Nature is or exists as such. They have only imitated the existence of nature. The concept of globalization (Guttal, 2007) also does not allow us to understand what nature is. Whatever the reason for the existing nature, the existing reality is the diversity of the things. The concept of globalization has also sought to break down the diversity that exists on the surface of nature. This implies that every theory seeks only to imitate or understand the appearance of nature.

As a whole, it is clear that all these discoveries made in association with nature explain the behavior of nature from various angles. Or it is clear that all theories about nature have failed to reveal the general doctrine of nature. Or the discoveries of science have shown that they have tried to investigate the true nature of nature in its functional sense. This does not diminish the value of scientific discoveries. It shows the boundaries of the existing intrinsic framework of the scientific approach. Or scientific theories are limited to an explanation of a feature of the natural world (National Academy of Sciences (US), 1999; The Stanford Encyclopedia of Philosophy, 2020). So the principle that drives the activism of nature is not filled by science, and that gap has to be filled further by philosophy.

7. Identifying the Components of Nature

Modern sciences have largely been able to grasp the nature of the physical world. Modern Science has been able to detect the rhythm of behavior in nature, build mathematical equations according to them, and predict them accordingly. That is, they have been able to explain the immediate cause of a phenomenon, if not an event in nature. For example, they may be able to explain the immediate cause of a rainfall or not in an area. Similarly, they can create a natural selection rule by observing the dependence of the other on the animal's behavior. Science is able to present the form of gravity mathematically. What do all these kinds of discoveries in Science mean? In what way To what rhythm? Under what circumstances Science has been described as such. In this way they have been able to solve two basic problems. That is, identifying the surface activity of the body and analyzing the most likely cause. However, Science does not address the question of why that happens. It is not considered a work of Science. The answer to the question why should be looked at in the philosophy. Therefore, the search for the constituents of nature is only a philosophical answer. Otherwise it must be solved first by philosophy. Second,

it must be verified by Science. To see something invisible, one must inject it. Or dig and display. Accordingly, the constituents of nature should also be visualized by drilling into it. It is the root that must be visualized here. What is invisible is the function of the root of nature. Or the philosophy of which the action of nature operates. Therefore, it is necessary to make the vision of its origin first.

One root of a tree with a trunk is used for this study. The root thus considered begins a journey parallel to the growth of the tree. The root thus considered begins a journey parallel to the growth of the tree. This journey begins with bringing water or nutrients needed for the tree to grow. Its sole function is to supply this need at the right time. There is no commander for this long journey in search of water or nutrient sources. There are no guides. It is its own process that identifies its own path. This journey should begin with the flowering of technology. The journey begins with the small roots in front of them so that they can pass through the very small holes in the soil. He sees everything that hinders and harasses this journey. This is a journey that sees and recognizes all obstacles. The rocks cross the road and obstruct. It can be used to break through the barrier or use force to overcome the obstacle or bypass it. This process is always common. Otherwise it is impossible to set a time limit. It also happens during the day. It also happens at night. It also happens during the rainy season. It also occurs during the dry season. same thing happens in the past, present, and future. No matter what obstacles come along the way, this root continues to move in its own direction at all times. There is no abandonment of purpose in the face of obstacles. There is no change of purpose or reversal in the face of obstacles. Always upholds its sole purpose. That is, it must eventually go to the cooling reservoir or feeding ground. Reaching a water or a nourishing ground in this way, however, does not make the target fulfil. It requires Science. The sending of water or nutrients beyond gravity should be based on science. If it fails to do so, its primary function will not be fulfilled. In this way the functionality of a root was dug up and visualized to determine what its functionality was based on. That is, it showed the root elements of nature. Or the philosophy of nature.

8. Discussion

The main purpose of this study was to understand the nature (*swabhaawa*). To achieve that, we conducted this study under seven secondary objectives. Accordingly we found that the nature (*swabhaawa*) is something or some condition that existing without the support of anything according to *pada vibhambakarana* method. Accordingly, nature could be identified as a self-behavior that is not related to another without the help of another. Based on the study of nature in relation to synonyms, it was emphasized that nature is about a trait or the quality of something living or non-living.

In the dictionary definition of nature, four main types were identified as 1 qualities of a person or thing, 2 causing and regulating the phenomena of the world, 3 elements of the natural world and 4 Relation with man. Among them, the concept of 'qualities of a person or thing' proves that nature is a generational wisdom. It is clear that 'causing and regulating the phenomena of the world' also means nature in a deeper sense. But even

there it does not describe nature, it describes nature as the ruling authority of the world. Based on the descriptions of experts about the 'nature' we found that 42% of the descriptions were about the learning benefit of nature. Such opinions were not helpful enough to understand the nature of 'nature'. According to *sakaaya nirukthi* method, nature is something born inheriting certain traits. Further, we studied the nature of study and findings that the scholars obtained on the concept of nature. Taken together, all of these discoveries made with nature have made it possible to describe the functioning of nature in various aspects. On a scientific basis, nature is the limit of their range of knowledge. However, according to their scientific findings, one thing is certain. That is, nature is acting on a scientific basis. So scientists are able to draw conclusions based on that. When identifying the components of nature as the final sub objective, we identified six components of nature. Those are 1. Having their own process. 2. Seeing and recognizing all obstacles 3. A time frame cannot be imposed. 4 always moves towards the goal. 5. Always focus on purpose. And 6. Acting on a science.

9. Conclusion

Thus, in conclusion, finally, it was possible to define what nature is. From the first six objectives of the study, it is clear that indirectly confirms the fact that the seventh objective was aggregated. Thus nature can be defined as a process that, by itself, sees and recognizes all obstacles, is timeless, in favor of its purpose, always aimed at its own purpose, and on a scientific basis.

9.1 Applications of the Findings

Often the focus of scholars is to investigate what needs to be done. But if the principle process of existence that we have found here can be applied to all our processes, there is room to build institutions that function effortlessly. For example, the principle of existence in nature can be applied to HRM. There is an ability to create a non-artificial motivation process by applying this principle to motivate employees. Doing so makes the motivational process seem more natural.

9.2 Further Research

However, this study only identified the components that make nature functional. But this paved the way for many future studies. Scholars are therefore invited to pay attention to the study of how the principles of the existence of nature are absorbed into all the concepts that are still being implemented with great effort.

Conflict of Interests

The authors declare no conflict of interest.

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References

Avineri, S. (1968). The Social and Political Thought of Karl Marx. In *The Social and Political Thought of Karl Marx*. Cambridge University Press.

<https://doi.org/10.1017/cbo9781139171410>

BrainyQuote. (2021). *Nature Quotes - BrainyQuote*.

<https://www.brainyquote.com/topics/nature>

Buddhist Cultural Center. (2013). *Piruwana Books*. Ajith Printers (Pvt) Ltd.

Cambridge University Press. (2021a). *Being* | meaning in the Cambridge English Dictionary.

<https://dictionary.cambridge.org/dictionary/english/being?q=Being>

Cambridge University Press. (2021b). *Character* | meaning in the Cambridge English Dictionary. <https://dictionary.cambridge.org/dictionary/english/character>

Cambridge University Press. (2021c). *Constitution* | meaning in the Cambridge English Dictionary.

<https://dictionary.cambridge.org/dictionary/english/constitution?q=Constitution>

Cambridge University Press. (2021d). *Creation* | meaning in the Cambridge English Dictionary.

<https://dictionary.cambridge.org/dictionary/english/creation?q=Creation>

Cambridge University Press. (2021e). *Disposition* | meaning in the Cambridge English Dictionary.

<https://dictionary.cambridge.org/dictionary/english/disposition?q=Disposition>

Cambridge University Press. (2021f). *Environment* | meaning in the Cambridge English Dictionary.

<https://dictionary.cambridge.org/dictionary/english/environment?q=Environment>

Cambridge University Press. (2021g). *Feature* | meaning in the Cambridge English Dictionary.

<https://dictionary.cambridge.org/dictionary/english/feature?q=Features>

Cambridge University Press. (2021h). *Humour* | meaning in the Cambridge English Dictionary. <https://dictionary.cambridge.org/dictionary/english/humour>

Cambridge University Press. (2021i). *Makeup* | meaning in the Cambridge English Dictionary.

<https://dictionary.cambridge.org/dictionary/english/makeup?q=Makeup>

Cambridge University Press. (2021j). *Nature* | meaning in the Cambridge English Dictionary. Dictionary.

<https://dictionary.cambridge.org/dictionary/english/nature>

- Cambridge University Press. (2021k). *Species* | meaning in the Cambridge English Dictionary. <https://dictionary.cambridge.org/dictionary/english/species?q=Species>
- Cambridge University Press. (2021l). *Type* | meaning in the Cambridge English Dictionary. <https://dictionary.cambridge.org/dictionary/english/type>
- Cambridge University Press. (2021m). *Variety* | meaning in the Cambridge English Dictionary. <https://dictionary.cambridge.org/dictionary/english/variety?q=Variety>
- Cambridge University Press. (2021n). *World* | meaning in the Cambridge English Dictionary. <https://dictionary.cambridge.org/dictionary/english/world?q=World>
- Claeys, G. (2000). The "Survival of the Fittest"; and the Origins of Social Darwinism. *Journal of the History of Ideas*, 61(2), 223–240. <https://doi.org/10.1353/jhi.2000.0014>
- Collins. (2021a). *Character definition and meaning* | Collins English Dictionary. <https://www.collinsdictionary.com/dictionary/english/character>
- Collins. (2021b). *Nature definition and meaning* | Collins English Dictionary. Dictionary. <https://www.collinsdictionary.com/dictionary/english/nature>
- Collins. (2021c). *Nature Synonyms* | Collins English Thesaurus (2). Thesaurus. <https://www.collinsdictionary.com/dictionary/english-thesaurus/nature/2>
- Collins, F. S. (n.d.). *Double Helix*. Retrieved January 27, 2021, from <https://www.genome.gov/genetics-glossary/Double-Helix>
- Dictionary.com, L. (2021a). *Cosmos* | Definition of Cosmos at Dictionary.com. <https://www.dictionary.com/browse/cosmos?s=t>
- Dictionary.com, L. (2021b). *Nature* | Definition of Nature at Dictionary.com. Dictionary. <https://www.dictionary.com/browse/nature>
- Dictionary.com, L. (2021c). *Nature Synonyms, Nature Antonyms* | Thesaurus.com. Thesaurus. <https://www.thesaurus.com/browse/nature>
- Elert, G. (2021). *Heliocentrism – The Physics Hypertextbook*. <https://physics.info/heliocentrism/>
- Encyclopædia Britannica. (2021). *Origin of Species* | work by Darwin | Britannica. <https://www.britannica.com/topic/Origin-of-Species>
- Guttal, S. (2007). Globalisation. *Development in Practice*, 17(4–5), 523–531. <https://doi.org/10.1080/09614520701469492>
- Hela Bodu Piyuma. (2013). *Hela Bodu Piyuma*. 10.
- Iwanowska, W. (1973). Nicolaus Copernicus and Modern Science. *The Journal of the Royal Astronomical Society of Canada*, 67(3), 105–114. <http://adsabs.harvard.edu/pdf/1973JRASC..67..105I>
- Kabai, S. (2007). *Double Helix - Wolfram Demonstrations Project*. Wolfram Demonstrations Project. <https://demonstrations.wolfram.com/DoubleHelix/>
- Khan Academy. (2021). *Special relativity* | Physics library | Science | Khan Academy. <https://www.khanacademy.org/science/physics/special-relativity>
- Kulatunga, M. (2020). *auto - Madura English-Sinhala Dictionary*. Dictionary. <https://www.maduraonline.com/?find=auto>
- Lexico.com. (2021). *Nature* | Definition of Nature by Oxford Dictionary on Lexico.com also meaning of Nature. Dictionary. <https://www.lexico.com/definition/nature>

- Lombardero, M., & Yllera, M. D. M. (2019). Leonardo da Vinci's animal anatomy: Bear and horse drawings revisited. In *Animals* (Vol. 9, Issue 7). MDPI AG.
<https://doi.org/10.3390/ani9070435>
- Macmillan Education Limited. (2021). *nature synonyms with definition* | *Macmillan Thesaurus*. Thesaurus. <https://www.macmillanthesaurus.com/nature>
- Mainzer, K. (2013). *Symmetries of Nature: A Handbook for Philosophy of Nature and Science* - Klaus Mainzer - *Google Books*. Walter de Gruyter.
https://books.google.com.hk/books/about/Symmetries_of_Nature.html?id=QekhAAAAQBAJ&redir_esc=y
- Marecek, L. (2020). *9.1: Simplify and Use Square Roots - Mathematics LibreTexts*.
[https://math.libretexts.org/Bookshelves/Algebra/Book%3A_Elementary_Algebra_\(OpenStax\)/09%3A_Roots_and_Radicals/9.01%3A_Simplify_and_Use_Square_Roots](https://math.libretexts.org/Bookshelves/Algebra/Book%3A_Elementary_Algebra_(OpenStax)/09%3A_Roots_and_Radicals/9.01%3A_Simplify_and_Use_Square_Roots)
- Maxwell, N. (2020). *Our Fundamental Problem: A Revolutionary Approach to Philosophy* - Nicholas Maxwell - *Google Books*. McGill-Queen's University Press.
<https://books.google.com.hk/books?id=oqXgDwAAQBAJ&pg=PT45&dq=Newton%27s+theory+of+gravitation,+it+refers+to+the+property+of+an+object+to+be+attracted+to+each+other&hl=en&sa=X&ved=2ahUKEwiA6ZnBk7ruAhU6yosBHaS6AP4Q6AEwAHoECAYQAg#v=onepage&q=Newton's theory>
- Merriam-Webster, I. (2021a). *Essence* | *Definition of Essence by Merriam-Webster*.
<https://www.merriam-webster.com/dictionary/essence>
- Merriam-Webster, I. (2021b). *Kind* | *Definition of Kind by Merriam-Webster*.
<https://www.merriam-webster.com/dictionary/kind>
- Merriam-Webster, I. (2021c). *Mood* | *Definition of Mood by Merriam-Webster*.
<https://www.merriam-webster.com/dictionary/mood>
- Merriam-Webster, I. (2021d). *Nature* | *Definition of Nature by Merriam-Webster*.
Dictionary. <https://www.merriam-webster.com/dictionary/nature?src=search-dict-box>
- Merriam-Webster, I. (2021e). *Nature Synonyms, Nature Antonyms* | *Merriam-Webster Thesaurus*. Thesaurus. <https://www.merriam-webster.com/thesaurus/nature>
- Merriam-Webster, I. (2021f). *Personality* | *Definition of Personality by Merriam-Webster*.
<https://www.merriam-webster.com/dictionary/personality>
- Merriam-Webster, I. (2021g). *Sort* | *Definition of Sort by Merriam-Webster*.
<https://www.merriam-webster.com/dictionary/sort>
- Merriam-Webster, I. (2021h). *Temper* | *Definition of Temper by Merriam-Webster*.
<https://www.merriam-webster.com/dictionary/temper>
- Merriam-Webster, I. (2021i). *Temperament* | *Definition of Temperament by Merriam-Webster*. <https://www.merriam-webster.com/dictionary/temperament>
- Merriam-Webster, I. (2021j). *Universe* | *Definition of Universe by Merriam-Webster*.
<https://www.merriam-webster.com/dictionary/universe>
- Ministry of Culture. (1985). *Sinhala Dictionary* (Volume 10:). State Printing Corporation.
- Ministry of Culture. (1992). *Sinhala Dictionary* (Volume 19:). State Printing Corporation.

- National Academy of Sciences (US). (1999). *Front Matter | Science and Creationism: A View from the National Academy of Sciences, Second Edition | The National Academies Press*. <https://www.nap.edu/read/6024/chapter/1>
- Norton, J. D. (2020). *General Relativity*.
https://www.pitt.edu/~jdnorton/teaching/HPS_0410/chapters/general_relativity/
- Palazzo, B. (2016). *The numbers of nature: the Fibonacci sequence - Eniscuola*.
<http://www.eniscuola.net/en/2016/06/27/the-numbers-of-nature-the-fibonacci-sequence/>
- Pearson. (2021). *description | meaning of description in Longman Dictionary of Contemporary English | LDOCE*. <https://www.ldoceonline.com/dictionary/description>
- Reich, D. (2020). *The Fibonacci Sequence, Spirals And The Golden Mean*.
<https://math.temple.edu/~reich/Fib/fibo.html>
- Reverso-Softissimo. (2021a). *in nature synonym | English synonyms dictionary | Reverso*.
<https://dictionary.reverso.net/english-synonyms/in+nature>
- Reverso-Softissimo. (2021b). *quality synonym | English synonyms dictionary | Reverso*.
<https://dictionary.reverso.net/english-synonyms/quality>
- Siegfried, T. (2015). *Einstein's genius changed science's perception of gravity | Science News*.
<https://www.sciencenews.org/article/einsteins-genius-changed-sciences-perception-gravity>
- STANDS4 LLC. (2021). *Nature Synonyms & Antonyms | Synonyms.com*.
<https://www.synonyms.com/synonym/nature>
- Su, F. E. (2019). *Fibonacci Number Formula – Mudd Math Fun Facts*.
<https://math.hmc.edu/funfacts/fibonacci-number-formula/>
- The Levin Institute. (2020). *What Is Globalization? | Globalization101*.
<https://www.globalization101.org/what-is-globalization/>
- The Stanford Encyclopedia of Philosophy. (2020). *The Structure of Scientific Theories (Stanford Encyclopedia of Philosophy)*. <https://plato.stanford.edu/entries/structure-scientific-theories/>
- United Nations. (2020). *Gross Domestic Product Per Capita Economic development Macroeconomic Performance Core indicator*.
- United Nations Development Programme. (2020). *Human Development Index (HDI) | Human Development Reports*. <http://hdr.undp.org/en/content/human-development-index-hdi>
- Will, C. M. (2015). The 1919 measurement of the deflection of light. *Classical and Quantum Gravity*, 32(12). <https://doi.org/10.1088/0264-9381/32/12/124001>
- Wolff, J., & Leopold, D. (2020). *Karl Marx (Stanford Encyclopedia of Philosophy)*.
<https://plato.stanford.edu/entries/marx/>
- Wyhe, J. van. (2002). *The Complete Work of Charles Darwin Online*. <http://darwin-online.org.uk/content/frameset?viewtype=side&itemID=A32&pageseq=29>
- yourdictionary.com. (2021). *Nature Meaning | Best 34 Definitions of Nature*. Dictionary.
<https://www.yourdictionary.com/nature>
- Yule, H., Burnell, A. C., & Crooke, W. (2013). *Hobson Jobson: A Glossary of Colloquial Anglo-Indian Words and Phrases, and of Kindred Terms, Etymological, Historical,*

Geographical, and Discursive. New Age Books. <https://www.amazon.com/Hobson-Jobson-Anglo-Indian-Etymological-Geographical/dp/8178224429>

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