ABSTRACT
The Indian Philosophy and the science of life, Ayurveda owe their existence to the Vedas, the most ancient source of knowledge. From the common origin they treaded their own paths in tandem with their respective goals. The goal of Indian Philosophy is the emancipation i.e. an all time cessation of pain whiles the Ayurveda aims to maintain the health which is requisite for the achievement of the ultimate liberation. Amongst the theistic schools of Indian Philosophy, the Vaisheshika school of Kanada is known for its fundamental tenets which not only shape the philosophical thinking but contribute a lot in the development of knowledge ranging from the modern day basic sciences of Physics & Chemistry to the Padartha (six categories) of Ayurveda that has transformed the concise trisootra Ayurveda to the level of widely approved contemporary science striving to march ahead. The contributions of the school of Vaisheshika in the development of the Ayurveda treasure of knowledge are manifold which needs to be reviewed in a scientific light. This paper therefore aims at the elucidation of the tenets of the Vaisheshika School like the theory of Paramanuvada (compared with the modern atomic theory), Peelupaka (Chemical change) et al and their application in the development of the fundamentals of Ayurveda.

KEYWORDS: Philosophy, Vaisheshika, Padartha, Paramanuvada, Peelupaka.

INTRODUCTION
It is believed that every science begins in philosophy, travels as science and culminates in the philosophy. Indian seers of yore have done a commendable job in the development of the fundamental vision of knowledge under the umbrella of the darshana (Indian Philosophy)
that forms the basis of the rational thinking and analysing of the facts. The exact date of origin of the Indian Philosophy is not known as it has evolved from the *Veda*, the ancient most source of knowledge.

The target of the Indian Philosophy is the promulgation of the ways to attain a complete and absolute liberation from all the pains and sufferings which involve the deliberation on various codes of knowledge that open the gates of one’s thinking and analysis of facts and myths. *Ayurveda*, an another Indian marvel dealing with the health, is based on its own unique and fundamental philosophy sharing a lot in common with the other Indian Philosophies. *Ayurveda* is a holistic system of medicine developed and nourished with all the knowledge sciences mainly the *darshana* (Indian Philosophy) but keeping its individuality intact. The intact and perpetual nature of the science of *Ayurveda* is dedicated to its strong foundation principles known as basic principles of *Ayurveda*.

Amongst the various schools of Indian Philosophies, the *Vaisheshika Darshana* enjoys a place of pride as it has contributed a lot to the formation and enrichment of the *Ayurveda* code of health maintenance and eradication of disease. This review paper is dedicated to the exposition of the literary and scientific appraisal of the *Vaisheshika Darshana* with special emphasis on the tenets of the *Vaisheshika* that have influenced the *Ayurveda* thinking especially the development of Basic Principles. The detailed review shall study the conceptual might of *Vaisheshika* School to decode its scientific code along with the comprehensive study of the applied aspect of the *Vaisheshika Darshana* especially in the development of the basic principles of *Ayurveda*. For this comprehensive review study the texts of *Vaisheshika Darshana* that include the various commentaries and deliberations and the *Ayurveda* classics including the commentaries and other available texts online and offline, relevant modern sciences texts, research journals, periodicals, Wikipedia and other relevant sources of authentic knowledge has been referred and subjected to deductive and inductive methods of thinking. The *Ayurveda* methods of exposition viz *Vakyashah* (as it is), *Vakyarthashah* (extended and elaborated meanings) and *Artha avayavashah vyakhya* (comprehension and detailed study of each word) has been utilized to generate the best of understanding.^[1]

**INTRODUCTORY REVIEW OF THE VAISHESHIKA SCHOOL**

The *Vaisheshika* School is one of the six theistic (*astika*) Indian philosophies that have shaped the Indian thinking. The other five philosophies include the *Nyaya, Samkhya, Yoga,*
Poorva Meemamsa & the Uttara Meemamsa. The school of Vaisheshika system is considered to be older than the Nyaya.[2] The first reference of Vaisheshika Darshana is available in the Bauddha literature, Milindpanha dated back at 150 BC.[3] However, the exact date of the inception of the Vaisheshika Darshana is not known but there is no ambiguity regarding the approval of its antiquity. The preceptor of the Vaisheshika Darshana credited with the main text, the Vaisheshika Sootra is the seer named Kanada also called as Kashyapa or Uluka. These names have their specific importance as the Kanada means a specific dietary habit i.e. it symbolizes the selective methodology of choosing the best.[4] The other authors consider the Kanada as the representative of the Paramanuvada which is compared with the contemporary atomic theory.[5] The word Uluka (owl) symbolizes the nocturnal habit i.e. he is supposed to compose the text in the day time and perform his efforts for earning livelihood during the night.[6] The Vaisheshika Sootra of Kanada is divided into ten chapters having the total of 370 verses. Each chapter is divided into two parts termed as AHNika (to be completed in a day). The other main texts include the commentary named Padartha Dharma Samgraha by Prashastapada and the expositions on it like the Vyomavati by Vyomashivacharya, Kiranavali by Udayanacharya, Nyaya Kandali by Sridharacharya, Kanada Rahasyam by Shankara Mishra et al.

The detailed analysis of contents and the number of verses in each chapter is tabulated below.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Chapter &amp; Section</th>
<th>No. of Verses</th>
<th>Main topics of discussion</th>
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<tbody>
<tr>
<td>01</td>
<td>01, First section</td>
<td>31</td>
<td>Exposition of Categories, Dravya (Substance), Guna (Quality/Attribute), Karma (Action)</td>
</tr>
<tr>
<td>02</td>
<td>01, Second section</td>
<td>17</td>
<td>Samanya (Similitude/Generality), Vishesha (Distinctiveness/Peculiarity)</td>
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<tr>
<td>03</td>
<td>02, First section</td>
<td>31</td>
<td>Dravya (Substance) mainly the five basic elements of Akash (Space), Vayu (Air), Agni (Fire), Jala (Water) &amp; Prithvi (Earth)</td>
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<tr>
<td>04</td>
<td>02, Second section</td>
<td>37</td>
<td>Dravya (Substance) mainly the Kala (Time) &amp; Dish (Space/Direction)</td>
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<td>05</td>
<td>03, First section</td>
<td>19</td>
<td>Atma (Soul), HETu &amp; Hetvabhasa (cause and its fallacies)</td>
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<tr>
<td>06</td>
<td>03, Second section</td>
<td>21</td>
<td>Mana (Mind), Atma (Soul)</td>
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<tr>
<td>07</td>
<td>04, First section</td>
<td>13</td>
<td>Guna (Quality, attribute)</td>
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<tr>
<td>08</td>
<td>04, Second section</td>
<td>11</td>
<td>Body adjuncts</td>
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<tr>
<td>09</td>
<td>05, First section</td>
<td>18</td>
<td>Karma (action), Samskara (Transformation) associated with the body</td>
</tr>
<tr>
<td>10</td>
<td>05, Second section</td>
<td>26</td>
<td>Karma (action), Samskara (Transformation) associated with the mind.</td>
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</table>
Thus from the above table it becomes clear that the philosophical school of *Vaisheshika* has postulated a wide range of issues ranging from the approval of the *Paramanu* (atom) as an indivisible unit to the issues pertaining to the six categories affecting the gross body. The epistemology of *Vaisheshika* includes the duo of the direct perception and inference as the means of valid cognition. Similarly, the vivid description of the *Vishesha* (distinctiveness) is some of the noteworthy postulates of the *Vaisheshika* School of philosophy.

**RELATION OF VAISHESHIKA WITH AYURVEDA AND ITS DEVELOPMENT**

There are a number of evidences that validate the effect of the postulates of the *Vaisheshika* in the formation and development of the fundamental principles of *Ayurveda*. The original *trisootra,*[7] form of *Ayurveda* was developed further by the seers of yore by the addition of the six categories of *Vaisheshika Sootra*.[8] *Ayurveda* has progressed from these *trisootra* form to the present day progressive science.[9] These six categories were rechristened as the *Kaarana*,[10] as they are the causative factors for the attainment of *dhatu samya* which is the balanced state or health.[11] The concept of the *Samanya* (similitude) and *Vishesha* (distinctiveness) owe their presence in *Ayurveda* due to the *Vaisheshika* School. However, it is noteworthy that the seers of *Ayurveda* have made necessary amendments in the philosophical tenets as per the need to make them conducive to its goal of maintenance of health like the sequential arrangement of the six categories in *Ayurveda*.[12]

The concept of the *Paramanu* (indivisible atom) is one of the greatest contributions of *Vaisheshika* School to the Indian science fraternity. The *Paramanu* is said to be *Nitya* (eternal) and *Parimandala* (round) suggesting the knowledge of the shape and size of such a minute unit.[13] This is an important landmark in the development of the concepts of evolution.
and chemical bonding. The various combinations of these subtle most entities result in the formation of gross structures including the body.

The definition of significant attributes of Gurutva (heaviness), Dravatva (fluidity), Vega (momentum) etc.,[14] again suggests of the scientific base of the school of the Vaisheshika. These definitions make us to believe the scientific might of the Vaisheshika School of philosophy. These qualities are applied to the best by the Ayurveda seers in development of the pharmacological principles.

The concept of transformation under the umbrella of the Naimittika dravatva indicates the chemical change under the influence of Agni which is the essential factor for transformation. Ayurveda also accepts the chemical change in the form of transformation of one dhatu to other dhatu explained in terms of Agni.[15]

The Abhava Padartha,[16] compared with non existence/negation finds its presence at a number of places in Ayurveda classics like the definition of Mana,[17] and the description of the various methods of examination.[18]

Thus, we conclude that the Vaisheshika Darshana has undoubtedly influenced the Ayurveda thinking and assisted the development of the basic principles of Ayurveda and the modern contemporary basic sciences.

APPLIED REVIEW

The applied review aims to explore the application of the concepts of Vaisheshika School in the clinical and practical aspects. The application of various concepts of the Vaisheshika is explained below.

a. Application of Six categories – The six categories of Vaisheshika termed as six causative factors in Ayurveda form the base of Ayurvedic diagnosis and treatment. The diet and medicine are categorised under the Dravya (Substance) which is the abode of the Guna (Quality/Attribute) and Karma (Action). The selection of the substances in the form of diet and medicine depends on the quality they possess. This is indeed the base of its action. The potency of a drug depends on the quality it possesses.

The other three categories of the Samanya (Similitude/Generality), Vishesha (Distinctiveness/Peculiarity) and Samavaya (Inherence) helps in the choice of diet and
medicine. The *Samanya* (Similitude/Generality) and *Vishesha* (Distinctiveness/Peculiarity) are the cause of increase and decrease of entities respectively.\(^{[19]}\) The judicious combination of the *Samanya* (Similitude/Generality) and *Vishesha* (Distinctiveness/Peculiarity) maintain the homogeneity of the body. Similarly in the treatment also, the depleted entities are nourished by the intake of the substances that increase the depleted while the increased entities are controlled by the use of *Vishesha*. The use of oil in the management of *Vata* is based on the concept of *Vishesha* as the oil is unctuous which pacify the dry *Vata*. The gain in the weight of body is due to the *Kapha* while the loss of weight symbolizes the increase in *Vata*. In the case of dehydration, the lost water is replenished by the intravenous fluids which are an excellent example of the *Samanya*.

b. **Paramanuvada** (atomic theory) and the *Peelu Paka* (chemical change) – The atomic theory of the *Vaiyoshika* is utilized by the Ayurveda experts in elaboration of the structural components of the body. The body is composed of innumerable units based on the number of *Paramanu*. Apart from the gross and countable structures of the body like the *shadanga shareera* (six fold division), *panchadasha koshthamga* (fifteen organs mainly of the abdominal cavity), *srotasa* (channels) et al, there are infinite minute entities which are not perceivable by the *indriya* (sense organs) because of their very tiny size. The body is therefore a combination of the *Paramanu*. This combination is unique and is the cause of the unfathomable manifestations of different forms of living and non living world.

*Peelupakavada* proposes the *peelu/paramanu* to be the stratum of change i.e. the alteration/transformation occurs at the level of *Paramanu*. The application of an external heat/fire transforms the *Paramanu* known as *peelu* and thus, the whole substance is perceived to be transformed. Due to the level of action as the *Peelu/ Paramanu*, this theory is also termed as *Paramanupaka*. The contemporary sciences propose the similar concept as the chemical change as the alteration takes place at the level of atoms. The digestion process or transformation of the non - utilizable form of nutrients into the utilizable form is termed as digestion. The ultimate transformation takes place at the level of the *bhootagnis*. The *bhootagnis* work at the level of *mahabhoota* and generate the *guna* like the *gandha, rasa* et al.\(^{[20]}\) This validates the utility of *Paramanuvada* in explaining the body metabolic processes. Therefore every change occurs at the strata of minute unit termed as *Paramanu*.

c. The concepts of *Gurutva* (heaviness), *Dravatva* (fluidity) and *Vega* (momentum) are also significant in the terms of modern basic sciences of physics and chemistry along with the
Ayurveda. The Guru, Drava and the Vega are the attributes of Kapha, Pitta and Vata respectively. The Guru dravya move downwards and therefore they are used in purgation while the Drava dravya are utilized in the Swedana therapies while the Vega is the cause of activity, a prerogative of Vata. These qualities explained in the Vaisheshika are utilized by the Ayurveda clinician in practice. The dietetics also relies on the quantity of the substances which is indeed decided by the attributes they possess. The heavy (Guru) substances take longer duration to digest and therefore should be consumed in lesser amounts in comparison to the light (Laghu) substances that are easy to digest. Thus, these concepts are very significant to comprehend in order to have a basic understanding and vision of the Ayurveda basics of dietetics and medicine.

DISCUSSION AND CONCLUSION

The Indian Philosophies have promoted the rational thinking and scientific development. The widely popular belief that the philosophies are related only to aesthetics and spirituality and is aloof of science is not true.

The scientific code has been in fact mentioned in the philosophies but the readers/observers lack the vision to understand it properly. History reveals that almost all the scientists were good philosophers i.e. to say philosophy and science complement each other. The seeds of science lie in the dormant state in philosophies which are activated by the scientific experiments and skills.

The Indian Philosophy of Vaisheshika is one of the hugely regarded and acclaimed theories that contain a number of scientific tenets. The development of Ayurveda, which per se is an independent philosophy has been attributed to the philosophical doctrines mainly the theistic ones.

The six categories of Vaisheshika are the causative factors for the establishment of normalcy of health. Everything in this world is either of the six; nothing is beyond these six factors. The contemporary sciences also use these six factors, although the approach is different. The treatment modalities cannot be planned without the utilization of the concepts of these categories. The Samanya and Vishesha are the categories recognized in Ayurveda as the foremost as they are the main cause of health and disease. The dietary regimen should be a perfect blend of the items that maintain the normalcy of the tissues in the body based on the concept of similitude and the dissimilitude. The similitude is the cause of increase while the
distinctiveness is the cause of decrease and these two needs to be taken care of wisely in the state of health and disease.

The theory of Paramanuvada (atomic theory) and the Peelu Paka (chemical change) is probably the greatest contribution of Vaisheshika Darshana towards the development of basic sciences. Considering the period of the Vaisheshika Darshana, kanada must be credited for establishing the atomic theory under the aegis of Paramanuvada. However, due to lack of proper research and experimental approach, this theory remains a hypothesis. This concept was given a scientific view in the form of modern atomic theory of John Dalton (6 September 1766 – 27 July 1844) proposing the atom as an indivisible unit which later was refuted by the scientist Sir J.J. Thompson in 1897 who proved atom as divisible unit consisting of the sub atomic particles like the protons et al. Thus, the modern science till date has not been able to reach the level of the actual indivisible and eternal unit termed as Paramanu by the Vaisheshika School.

Similarly, the Peelu Paka (chemical change) which is based on the Paramanuvada is another validation of the scientific expositions in the Vaisheshika Darshana. Every chemical transformation occurs at the level of Peelu (atom) which in various combinations produces the variegated beauty in the world. The health sciences including Ayurveda utilize this theory in explanation of the body phenomenon like that of digestion and metabolism.

In this way, it is quite clear that the Vaisheshika Darshana has been pioneer in the development of the basic principles of Ayurveda.

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