

The Challenges of a New Path of Research in Ayurveda

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Recontextualising timeless Ayurvedic knowledge and wisdom

Ayurveda is eternal and does not need help to be preserved. On the contrary the human knowledge, awareness, understanding and appreciation of Ayurveda is what is at risk. The knowledge of Ayurveda and its timeless wisdom reached by ancient Rishi and Acharya, and preserved for thousands of years, is at a crossroads facing a threat of 'extinction' at a time in human history that is dominated by confusion, fragmentation and uncertainty. In my opinion, this danger can only be avoided through properly directed Research and the subsequent diffusion of both the fundamental principles and the research outcomes as well as their practical applications. Based on my experience of almost three decades of intercultural dialogues and interactions between Italy and India, and also on my efforts to propagate Ayurveda and Yoga in an European context where the dominant health and wellbeing culture is deeply embedded in the Western reductionist paradigm, I propose "Collaborative Medicine and Science" (Co.M.S.), a conceptual framework involving at least three bold initiatives: 1) **Reformulation and contextualisation of the Ayurveda fundamentals**, 2) **Ayurveda Modeling**, and 3) **Ayurveda Localisation**. The novel contextualisation process of this ancient knowledge, I visualize, will be based on a higher level of human consciousness once enjoyed and exercised by the ancient Rishi's and Acharya's. Such a new contextualization based on these three and perhaps even other such directions will foster and help reach a new coherent and cohesive representation of Nature and in turn will make Ayurveda available and acceptable to for everyone and everywhere.

Ayurveda Research: Quantum, Quality, Quantity,

Trajectory and Impact

It is evident that Research in Ayurveda is growing fast. PubMed, the largest database of scientific articles with more than 28 million citations for biomedical literature, reveals just over 5,000 abstracts using the search keyword "ayurv*". Since 2010 almost 60% of these articles produced from 1945 to the present have been published⁽¹⁾. Several of these and many others not PubMed indexed are also available in databases like DHARAONLINE⁽²⁾ or AYUSH Research Portal⁽³⁾. However, not all of this Research is of a quality or of value to contemporary needs, or well directed or useful to reveal the underpinning value of ayurvedic principles and their applicability to modern environment^(4,5). Even if a research disposition and inclination has always existed in the Ayurveda tradition, it is only in very recent times that Ayurveda has been exposed to and requested to be challenged with the modern concept of Research as an organised activity, as it is intended today in the bio-medical field^(4,6,7). These are of course problems, but in my opinion it is not the real issue as the quality of Research in Ayurveda will come with time.

Guiding and directing the learning curve of Ayurveda Research

The learning curve of Researchers in Ayurveda is still ongoing and it will grow steadily in the next years. Instead, in my opinion what is of crucial importance is the "direction" of Research, whether it is conceptual, fundamental, pure or applied and clinical research. What is the scope, and what is the message that Ayurveda wants to contribute in the worldwide scenario of Research? The answers to such questions are what will have the most significant impact on how Ayurveda will be recognized,

appreciated and respected by Modern Science. Will Ayurveda be able to induce a momentum leading to “revolutionary” research, as per Thomas Kuhn definition⁽⁸⁾, or will it only enter in a “normal” pathway of research, nowadays mainly dominated by the reductionist system of thinking? For this reason, Research in Ayurveda has to be coordinated and directed in order to reveal the underpinning principles and values. This in turn could ignite a Revolutionary Process in the scientific thinking, which in turn will impact thinking in Modern Medicine and Science. The nature of this kind of Research activity has to be Epistemology-sensitive and structured according to the conceptual premises of Ayurveda, while fulfilling the demands of organisation and coherence of modern Science.

Anticipating, appreciating, refining and resolving epistemological differences and clashes:

An argument is sound and valid only if the premises are true, thus the conclusion is guaranteed to be true. According to this rationale, we need premises that fit together into a certain pattern that yields the conclusion. If we do not recognize, instead deny the epistemological and ontological foundations of Ayurveda, we cannot expect true and innovative conclusion in our studies. This is the fundamental premise for a real impact of Ayurveda in Modern Science. However, this also poses a crucial problem since Ayurveda and Modern Medicine and Science are founded on diverse epistemological systems. They are two conceptual ‘structures’ that are coherent in themselves, with their diverse ontological models of reality which cannot be overlapped. Their “integration” is very difficult and complex. Nonetheless, the meeting between Ayurveda and Modern Science is needed in order to obtain the “Revolutionary research” and the emergence of a new, more complete perception of reality. Clearly what is then required is not just “integration” but rather a “docking” or interfacing of one system with the other, in order to preserve epistemological authenticity and conceptual diversity but to nurture a comprehensive view of Medicine and Science at large. Recently, some efforts have been made in the direction of understanding of “integration” as synergic interaction, collaboration, rather than

assimilation⁽⁹⁻¹⁴⁾.

The recent years have also witnessed important new trends of Research in Ayurveda and a novel approach is taking shape with the aim to establish a dialogue with Modern Medicine⁽⁹⁻¹²⁾. A paradigmatic example is the recent support from molecular biology for the validation of Ayurveda’s *Prakriti* (individual constitution)^(15,16). The evaluation of *Prakriti* takes into account the constant interaction between environmental, physical and epigenetic components that contribute to shape the individual psychophenotype. Its full and proper understanding is therefore determinant in order to convey and share Ayurveda’s principles with Modern Medicine and Science. Further trends, witnessing this novel cross-epistemological approach, span from the clinical use of physical and rehabilitation treatments to the management of chronic diseases and aging, from the elaboration of new models of health and disease to public health management^(13, 17-19).

“Collaborative Medicine and Science” (Co.M.S.): A proposal for interfacing, docking and anchoring Ayurveda and Modern Medicine:

However, in my opinion, all these valuable research activities are sparse, tending to cope with isolated topics and not coherently collected under a conceptual framework tending to build a coherent vision of Ayurveda understandable to and sharable with Modern Medicine and Science. To realize the true “docking” and interfacing between Ayurveda and Modern Medicine some “anchorage” points are needed, some common conceptual points through which the two systems can communicate. Such elements can derive from a constructive confrontation, a collaborative approach, based on a process of cross-cultural translation, where the fundamental epistemological concepts are “reformulated” in order to make them reciprocally understandable. “Collaborative Medicine and Science” (Co.M.S.) is a newly introduced conceptual framework⁽¹⁴⁾ that focuses on the “reformulation” process and that aims to provide a coherent pathway to the research in Ayurveda. Its basic assumption is that there is no need to prove that Ayurveda works,

because it does, history confirms it. It will be a waste of time and resources proving its effectiveness according to the parameters and framework of modern biomedicine, which in their essence do not fit the epistemology of Ayurveda. Moreover, it would not be useful to convey and share such scientific interpretations of Ayurveda because it will bring only marginal advantages to Modern Medicine and Science. Instead, the real revolution lays in the three main questions that Co.M.S. considers: What, How and Why: What is working, How it is working, Why it is working. The process in answering these questions will force the two knowledge systems, Ayurveda and Modern Science, to consider different perspectives which likely will conduce to the emergence of novel key elements necessary for a paradigm shift: the change which will characterise a “Revolutionary Research” not only for Medicine but for all Science. It is important not to limit the application of Ayurveda to medical field since its theoretical foundations, if properly contextualised and translated, have the potential to involve the entire scientific domain.

The Co.M.S. Strategy, in order to kindle future research and activities to interface Ayurveda and Modern Science and Biomedicine, considers three main conceptual approaches that are closely interrelated: 1. Reformulation and contextualisation of the Ayurveda fundamentals, 2. Ayurveda Modeling 3. Localisation of Ayurveda.

1. Reformulation and contextualisation of the Ayurveda fundamentals

The ability to reformulate the epistemological foundations of Ayurveda in sharable concepts is a crucial step for an adequate relationship with modern science. The reformulation process includes also the proper interpretation and contextualisation of the classical texts where the knowledge is coded. Today’s world presents an inherent complexity that must be taken into account for the application of the classical texts indications. This “reformulation” could foster the discovery of convergences and similarities, as well as differences between knowledge

systems, leading to a global enrichment of the whole medical knowledge. Finding commonalities will be crucial for mutual comprehension and for going beyond the limits of current scientific understanding. This process could ultimately result in authentic integration, implying the harmonious and synergic co-existence of more than one system, rather than the merging of other systems into a dominant one. In the field of Medicine it will generate a complex and comprehensive view of health, which will ignite the emergence of new paradigms. Finding commonalities between *Padhartha Vijnana, Mahabhuta, Guna, Agni* and the modern concepts of reality, matter, mind, time, energy, are some of the fundamental challenges.

2. Ayurveda Modeling

The application of scientific, conceptual as well as graphic modeling will allow overcoming the existing communication gap between diverse cultural and knowledge systems. Ayurveda Modeling will be utilised to describe and formalise in a logical and objective way the principles used in Ayurveda to interpret reality. The simulation, visualisation, manipulation and intuitive understanding of the diverse entities, processes or phenomena will enhance individual and mutual understanding and it will create a reference point for sharing and collaboration. One example out of many possibilities, the recent representation that we made of Ayurveda through Complex Adaptive Systems that offers a breakthrough vision in terms which are congruent with Modern Medicine and Science⁽²⁰⁾.

3. Ayurveda Localisation

Ayurveda, being the science of life can be applied everywhere there is life. However the diverse ecosystems and sociocultural milieu leads to manifold expression of living beings and their socio-behavioural schemes. Thus, Ayurveda, which in its pragmatic form is emerged according to the Indian domain, cannot be just merely transported through latitudes. It is necessary to “extract” ayurvedic principles from the Indian location and re-discover them in other local environments and Traditions.

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The previously described activity of reformulation and contextualisation will be of fundamental help. The regional application of the “Localisation” concept will enable a versatile application of the principles of Ayurveda worldwide, creating systems of healing that are suited to the local conditions and individual variations. Through “Localisation” Ayurveda will be available for everyone and everywhere.

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