

The shifting paradigm: Who is the intellectual of the 21st century?

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The world is in a constant state of flux and as a consequence, definitions and perceptions of the word 'intellectual' are subject to change. This paper undertakes a succinct historical review regarding this notion by considering two paradigms, which are called here the 'Lake Paradigm' and the 'Well Paradigm'. It is argued that these two paradigms fail to educate the intellectual of 21st century. Then a new paradigm, the 'Valley Paradigm,' is put forward, which is thought to be capable of educating a new generation of intellectuals.

Intellectual, learning, education, interdisciplinary, knowledge

INTRODUCTION

The notion of an Intellectual has always been of man's utmost interest and concern. Although *The New Dictionary of Cultural Literacy* defines an intellectual as "A person who engages in academic study or critical evaluation of ideas and issues", it goes without saying that this notion is a time-oriented issue in nature and thus in any given period of time, it is perceived differently. This paper endeavours to classify these perceptions retrospectively into two paradigms which I call the 'Lake Paradigm' and the 'Well Paradigm'. It proposes the idea that the 21st century intellectual does not fall into either of the two paradigms. Hence a new paradigm is introduced and supported by evidence which I call the 'Valley Paradigm'.

The Lakes

Since the dawn of the recorded history to the time which Drucker (1994) has called the beginning of the Industrial Era, science has been viewed as enlightenment. It was divided into a few main branches, the full mastery of which was feasible by any individual who then would be called a 'Hakim' or a 'Guru'. These individuals might have been called the intellectuals of their time as they had a shallow understanding, compared to our current perception of science, yet deep in its own magnitude, since nearly everything that could be called science was known to them. In short, one could say 'intellectuals knew something about everything'. Their span of knowledge covered a wide variety of subjects, but as science was in its early stages of growth, their collective body of knowledge was not very deep by contemporary standards. In this sense, I have used the metaphor of a lake, since a lake is not usually deep but it covers a relatively wide area. Such intellectuals would have met successfully all the expectations of their time. Figure 1 illustrates a typical example of such an individual.

The Wells

With the advent of the Industrial Era, different branches of science began to diverge and became more and more independent from one another. At the same time, they started to grow quantitatively at an accelerated pace. This divergence gave rise to disciplines that once did not

even merit a title in the earlier disciplines of the Lake Paradigm era. As the sciences became more and more specialised and detailed, each discipline thrived qualitatively as well as quantitatively and consequently the trend in education moved toward educating and producing experts who had an in-depth knowledge of one and only one discipline. They were individuals who were supposed to know ‘everything about something’. Their knowledge could be described as a deep well, hence the metaphor of the well. The vertex of this paradigm was in the last quarter of 20th century with the increase in the numbers of PhD and post-PhD holders all around the globe, and particularly in the United States that was considered to be one of the cradles of the modern world's education. These individuals became the intellectuals of their time. Figure 2 provides an example of such an individual.

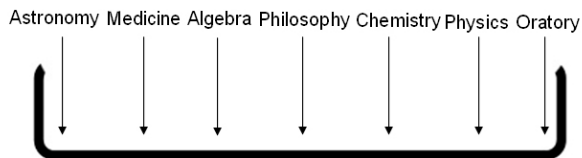


Figure 1. A typical lake individual



Figure 2. A typical well individual

The Call for a Change

The ever-increasing and divergent growth of disciplines in the 20th century, though outstandingly influential in the modern world, causes a phenomenon which I dare to call ‘scientific alienation’ among different disciplines. Each discipline has become discrete and narrow to the ultimate extent at the expense of losing sight of ‘the big picture’. Thus the interrelatedness of the essence of knowledge as a human enterprise is gradually being ignored. This deficiency is highlighted when the intellectuals of the well era have failed to provide solutions to problems and dilemmas they have encountered in different realms as they each try to devise a solution from their own limited perspective. This is not to discredit such individuals. The root of this inability lies to some extent in the changing nature of problems and issues of modern society, the society which Drucker (1994) called ‘the knowledge society’. These new concerns, which are essentially organic in nature, call for a new paradigm which would educate individuals with different capabilities.

The Valleys

The issues and concerns of the modern world are multifaceted and organic and thus any attempt to deal with them from a single perspective is doomed to fail for obvious reasons. The systematic nature of such issues makes any given solution to one aspect potentially counterproductive in respect to other aspect(s).

One remedy to this is provided with the introduction of interdisciplinary fields of study such as industrial psychology and neurolinguistics. Such fields of study have tried to shed some light on the previously ignored or untouched areas and have proved to be useful, but as they grow richer and more solid in their own right, they have become dogmatic and have lost their flexibility and insight.

The intellectual of the 21st century is an individual who possesses a deep knowledge of one or two disciplines (the abyss of the valley) as well as some knowledge of a number of other disciplines (the steep sides of the valley). Such individuals would be expected to ‘know a lot about some thing and something about a lot of things’. He or she is a living example of an interdisciplinary individual. Figure 3 illustrates a typical example of such an individual.

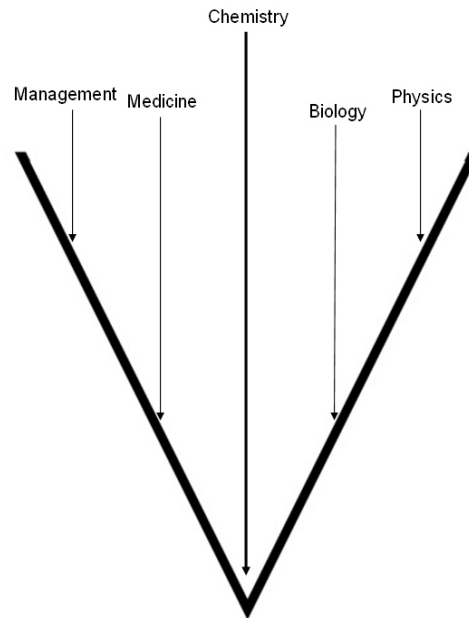


Figure 3. A typical valley individual

Such individuals can enjoy the full benefit of synergy. In other words, the possession of a great deal of knowledge from a wide variety of disciplines would build a totality which is more than the sum of the parts. Fulfilling the definition that is presented in the introduction to this paper, such individuals are likely to develop a unique capacity to provide “a critical evaluation of ideas and issues” since they can see numerous aspects and facets of issues. In other words, these intellectuals can see issues that are in the murky areas of a discipline invisible to experts in those fields. As such, I would improve the earlier definition of an intellectual as follows: ‘A person who engages in the study of a *number of disciplines* in order to empower *him or herself* to provide critical evaluation of ideas and issues and to *shed light* on new areas of knowledge by seeing *invisible networks* among different areas’.

Part of the evidence for the functional value of such individuals comes from real life examples. Some of the most revolutionising ideas and concepts in science in the late 20th century came from individuals whose abyss area of expertise was different from their field of specialisation (the valleys). Their multidimensional view helped them see the network of interrelated elements which had continued to elude the most meticulous observations of the experts in those fields (the wells). A good example would be Noam Chomsky, a celebrated professor of linguistics whose ideas about philosophy, intellectual history, international affairs and United States foreign policy have unquestionably revolutionised a good number of paradigms in these fields. Another illustrative example is Abdol Karim Soroush, an MS holder in pharmacology who earned his PhD in the history and philosophy of science. His ideas in the realm of divinity, philosophy and epistemology have earned him worldwide recognition.

Another way of detecting evidence would be to consider the fact that some of the most profound ideas such as buffering in change management, fuzzy logic in engineering, neural networks in management, to mention just a few, come from biology, mathematics and neurology respectively.

If it had not been for the individuals in the target discipline or field who developed an orientation in the source discipline, such innovations could not have taken place.

These pieces of evidence give credence to the desirability and functional value of such valley individuals. There is, therefore, a call for a paradigm shift on the part of learners from mono-discipline learning areas (well) to move towards a multi-disciplined (valley) paradigm of learning. Naturally such a shift should be supported and facilitated by educators and the whole education system through a parallel paradigm shift.

CONCLUSION

Today's problems cannot be handled with yesterday's solutions and problem solving techniques. The appropriate solutions and techniques do not seem to come from a mind bound to any single discipline. This is not to say that each individual is supposed to know everything, but I believe that the days of individuals who rely on a single field of expertise are numbered.

The valley paradigm that I have suggested might be viewed as the recipe for the education of a 21st century intellectual, and I believe that it is likely to be the means of survival in the 22nd century as well.

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