

# Indigenous knowledge and scientific knowledge



**ASSIGN  
BUSTER**

In this essay the paradoxes and difficulties associated with the ongoing debate between 'Indigenous Knowledge' and scientific knowledge will be thoroughly discussed. An attempt will be made to take a stand and decide whether 'Indigenous Knowledge' and 'Scientific Knowledge' should have distinct boundaries or whether they are able to co-exist successfully. In order to do this, reference will mainly be drawn from readings by L. Green (2012), M. Leach and J. Fairhead (2002).

I will draw on evidence by these authors in order to argue that the distinctions between the two different types of knowledge needs to be destroyed and that they need to be able to co-exist so that differentiation is acknowledged, therefore safeguarding the interests of minority groups and cultures. Finally, I hope to show that it is vital to be aware that in today's world there is not simply one type of knowledge and recognising that the idea of different knowledge systems that people believe in are dynamic and constantly changing.

'Indigenous Knowledge' is knowledge associated with and shared by a specific culture. It is accumulated over generations of living in a particular environment (Warren 1991: 23). It could possibly in most cases be the basis for "local decision making in rural communities"( [www. http://jis. sagepub. com](http://jis.sagepub.com)). In contrast to 'Scientific Knowledge', native people who live a traditional lifestyle come to understand their natural environment by experiencing things.

Their daily observations and interactions with nature offer a deep and sincere awareness that is holistic and rooted in their cultural understandings,

which are shared orally and passed from generation to generation, often in the form of stories. While 'Indigenous Knowledge' is sometimes seen as completely different to 'Scientific Knowledge', the two are able to complement each other in order to provide a broader understanding of the world. 'Scientific Knowledge' is knowledge which is obtained through applying process of the scientific method to things in the world around us in order to prove their existence and truth.

Scientists usually justify the distinction between 'Indigenous Knowledge' and 'Scientific Knowledge' by saying that science is a term and a type of knowledge known worldwide but 'Indigenous Knowledge' is knowledge known only by a particular culture and relates to the way they perceive the world. 'Indigenous Knowledge' is mainly perceived as a different type of knowledge and one that is less efficient because it does not fit the same criteria. Since the second World War the question of a country's growth has evolved through many stages; economic growth and sustainable development (Bates 1988: 167).

One of the more sophisticated words that have now begun to take over the 'informal' dictionary of development experts is 'Indigenous Knowledge'. In the areas in which 'Western Science' has been unsuccessful, local knowledge is often viewed as the best alternative strategy in the solving issues like hunger and poverty. (Atte 1992: 22) In previous environments, experts of development saw 'Indigenous Knowledge' as unproductive, substandard, and a problem to economic growth.

Contemporary perspectives about 'Indigenous Knowledge' recognizes that these disparaging assumptions of traditional knowledge may be unfounded. Simply put, the term 'Indigenous Knowledge' emerged from the process of finding solutions for the past that was not able to change life for the disadvantaged individuals in the world while using Scientific Knowledge. "Ten years ago, most of the academics working in the area of indigenous knowledge represented anthropology, development sociology, and geography.

Today, important contributions are also being made in the fields of ecology, soil science, veterinary medicine, forestry, human health, aquatic science, management, botany, zoology, agronomy (the study of soil management and crop production), agricultural economics, rural sociology, mathematics, fisheries, range management, information science, wildlife management, and water resource management shifts crucial to development" (Warren et al 1993: 2). This shows that 'Indigenous Knowledge' is being used and valued both on its own and also in conjunction with 'Scientific Knowledge'.

Scientists believe that science is the best type of knowledge because it is able to be proven and tested. They do however acknowledge other types of knowledge and many ways of perceiving and making sense of the world but do not place as much value on those (Green 2002: 3). However, in the world today, a country's ability to build and obtain knowledge is just as essential for growth as financial capital (World Bank 1997). The most important indication of any country's knowledge is its 'Indigenous Knowledge'.

It combines the skills, experiences and insights of people, and uses them in order to provide a better life for themselves and those around them. The debate is that 'Scientific Knowledge' is more superior than indigenous knowledge, although according to Leach and Fairhead (2002: 301), the two can co-exist. Their argument is that both types of knowledge are destabilized by the fact that "all knowledge is socially produced" (Leach and Fairhead 2002: 301). This causes the divides between the two to be dissolved into a plethora of perspectives that causes curiosity in both areas.

People will start questioning 'Scientific Knowledge' and not blindly believe everything that is scientifically proved and they learn to give 'Indigenous Knowledge' a chance. In the example provided by Leach and Fairhead, 'Scientific Knowledge' is successfully combined with that of 'Indigenous Knowledge'. Knowledge of hunters from the Republic of Guinea in West Africa seems to be deeply rooted in the culture and history of their surroundings and believe to be rather free from the beliefs of the state and the government.

Despite this, traditional hunters are found forming relationships with government and with foreign donor organisations when it comes to the maintenance and organisation of their national parks (Leach and Fairhead 2002: 302). Hunters are using the opportunities provided by these interactions in ways that will benefit them and their people. In Guinea during the 1980's, extreme concerns about environmental ruin were expressed. This developing country requires and depends on funding from international donors for their work in conserving and preserving the environment.

For example, European investments have supported the creation of new national parks. This new generation of parks is allowing the development of new relationships between hunters and government. (Leach and Fairhead 2002: 301) Another example of the two types of knowledge merging successfully is the growing emphasis being placed on ' Citizen Science' (Leach and Fairhead 2002: 300), in which case, unprofessional, ordinary people conduct scientific research in the best way that they know.

This helps to give a different overview from the perspective of someone who has no scientific qualities and has no other way to conduct research other than based on their own cultural capital and experiences. In the case of medicine, " Former President Thabo Mbeki saw traditional medicine as the antithesis of an exploitative Western pharmaceutical industry" (Green 2002: 3). The conceptual opposition generated a deadly distinction, either African medicine or Western science, this resulted the South African state's inability to provide antiretrovirals.

This failure contributed massively to an AIDS mortality figure of well over 3.41 million indicating a mortality rate of almost 850 people every day in 2009. That dismal figure sets up an extraordinary responsibility for scholars anywhere who seek understanding to seek ways improve that figure by pursuing the value of alternative ' Indigenous Knowledge' (Green 2002: 3). Both ' Indigenous Knowledge' and ' Scientific Knowledge' are different in the sense that they are drawn from different sources and are relevant in different situations.

This however, does not mean that they are opposite. It just suggests that although they are different, there aren't any tight boundaries surrounding either of them. They can, in certain instances overlap, like in the case of 'citizen science', and most recently, acupuncture, which has managed to weave its way into western life and medicine. This essay started off by analysing the division between indigenous and western knowledge. The distinction first ruined the possibility that any type of knowledge can be predetermined as being 'indigenous knowledge' or 'scientific knowledge'.

I suggest that attempting to create divisions between these types of knowledge is not the right, and most productive approach. When we destroy these distinctions we will be in the right position to recognize differentiation, and when we try and find similarities between the indigenous and the scientific, we will be able to protect the interests and needs of those who are disadvantaged.