

# Restructuring the knowledge production value chain in publishing

## Alexis Weedon

UNESCO Chair in New Media Forms of the Book  
University of Bedfordshire, United Kingdom

The current system of publishing (i.e. knowledge sharing) values individualism and commodification, restricting our use of existing knowledge. The Western model of knowledge production is not currently inclusive of other forms of knowledge, which inhibits the reuse, adaptation, reinterpretation and development of existing knowledge. The author proposes that knowledge systems be purposefully re-created to prioritize the end users' needs and value them as co-creators.

---

Since the Gutenberg printing press, the dominant communications infrastructure for the dissemination of knowledge in the West has been publishing. In the East, printing ensured consistency of information across geographical distances. In the South, oral storytelling and symbolic art have been used to encode and communicate information across generations. Today, the number of ways of imparting knowledge has multiplied and these older forms have been joined by many more ways to transmit knowledge through radio, television, mobile phone and computer.

## Who owns the knowledge?

These communication systems share the common characteristics of gatekeeping, reproducing and packaging knowledge for dissemination. Yet, different societies have different approaches to the ownership of knowledge. In some, knowledge is commodified for sale by the book and journal publishing trade while in others, centralized verification and communal ownership predominates. In the South, indigenous practices embed cultural identity with knowledge systems.

The global reach of our communication infrastructure brings these into unprecedented proximity. What was once solely a cultural activity of a community performed in a set time and place can now be shared across a wider geography and replayed through recorded technology. Indigenous practices that emphasized the communal ownership of knowledge that is beneficial to society through oral storytelling have been extended through broadcast radio and mobile technologies. These operate within a system of ownership of cultural property that may not be compatible with the commodification of knowledge common in

the West. It brings into question the ownership of the story and the performance of the story in its telling. Questions that have no meaning in indigenous knowledge systems.

## The shifting ecology of knowledge

Globally, we need to ask: to what extent are the rewards of creativity individual or communal? Cultural and artistic knowledge is perpetuated and reaffirmed through social practice while systems of knowledge governance are in place to reflect this pattern of use in the present and safeguard it for the future. In Western publishing models, expression through words, performances or other visual means are designated as property. Ownership can be assigned to an individual or a company and can be exchanged, traded and licensed for reproduction through the right to make copies. Yet, the individualism of creative endeavor can be a stranglehold as we learn from each other and retain what is best and most relevant from the past. Moreover, indigenous knowledge systems of storytelling that are communal can be in conflict with the ownership of knowledge through the mechanism of international copyright law.

Not all information adds to knowledge nor is all knowledge new. Knowledge is subject to adaptation, refinement, reinterpretation and remixing. It is mutable. The ecology of knowledge is not one of absolutes and diversity is essential to development.

Learning, practice and the application of existing knowledge reaffirms its utility in the modern world. This is done in different ways. 'Inductive knowledge' derived from observation and experience can be communal – whether it is tested by a body of scientists and published in journal literature or built by a community and passed on as the fruits of experience and knowledge of ways of living. It can also be individual as the artist learns from their practice. 'Deductive knowledge' drawn from interpretative theories of the world can also be communal or individual as philosophers, poets and artists derive insights from the application of their theories in the world. In both epistemologies, knowledge lies in the relationship of information to an existing problem in the world.

## Western models of knowledge production need to be overhauled

Scientific research is necessary to generate new knowledge. Evidence has to be rigorously and objectively assessed through research to offer an interpretation that provides new insights. Good research advances on solid foundations of previous research and adds to knowledge that should stand the test of time. It is not repetitive, it is not commentary. It provides new methods, new ideas and new data. The distinction between research and argument, evidence and interpretation, knowledge and belief, fact and activism need to be maintained. Research brings forward new knowledge for verification.

Knowledge should be verifiable and able to withstand challenges. Systems of knowledge verification, authentication and dissemination are needed to facilitate the Sustainable Development Goals through communicating knowledge freely at the point of access. The proliferation of communication systems has divided and limited access in some areas while in others, made much more information available. Systems of knowledge dissemination

need to prioritize beneficial knowledge for immediate, medium and long-term application that may be disseminated through messages from global priority organizations such as the WHO or UNESCO. These bodies need to ensure multilevel access to original research data on which new knowledge is based to enable the ability to verify and correct them to ensure that information comes from trusted sources.

Through its highly adaptive book and journal publishing system, Western society has been able to ensure that creative, artistic and innovative scientific ideas reach an audience. Building and developing previous work to use as inspiration and tools for creativity is embedded in indigenous practices and the legal concept of the public domain. However, the Western model is not currently inclusive of other forms of knowledge as it inhibits the reuse, adaptation, reinterpretation and development of existing knowledge. Effective immediately, this system must change to ensure cultural renewal and the dissemination of new knowledge to all for the common good.

Research into the physics of the universe, health of our bodies, effects of forces of change on the earth's ecosystem and so on require a different approach to the modes of inquiry pursued in the humanities and the creative arts. A top-down approach has been proposed by major national research agencies (NRAs) and funders from twelve European countries. Plan S proposes that research funded by public agencies be made available as open access through journals or institutional repositories and explicitly exclude hybrid forms of publication (Science Europe, 2018). Through this initiative, the substantial and high-quality research that has emerged from European research funded projects would be freely available as publications funded by the Universities that host them. The output of the substantial research funding (numbering well in the million) that these schemes award would thus be accessible online; authenticated, verified and published. The end user here, however, is a more remote figure than the peer reviewer who assesses the utility of the research findings for future knowledge production. This is a somewhat circular system that reinforces the top-down targets of the NRAs and does not open up research to serve the public, individual or community needs. A bottom-up approach is available through crowd funding in 'kick starter' platforms where the end user actively contributes start-up income and can comment on the proposed project. These are typically low-cost creative projects (more often for the development of an idea rather than to research it) that after initiation have to generate their own income.

Models of contemporary publishing refer to a 'value chain' that starts with the author or creator. This model of publishing is based on the author's desire to share their creation. The subsequent processes of checking, verifying, editing, authenticating, packaging, transporting, selling and delivery is additive as each agent in that process 'adds value' to the original, which is then paid for by the recipient. The focus has been on the effect of technology on simplifying or removing the intermediate services. 'Disintermediating' has brought into question the value and function of the links in the chain. This is exacerbated by algorithmic pricing that calculates the value of knowledge at the moment of demand, leading to extreme variability in prices. This can disincentivise certain forms of inquiry and creativity while excluding and rarefying knowledge. A radical overhaul of this way of thinking and doing is needed.

## Knowledge systems need to value the end users as co-creators

Creating a knowledge system centred on the individual or community's desires and requirements will flip the value system. From this position, the community, audience or readership become the instigator of creative inquiry. Understanding our humanity and creativity both as individuals and groups has long been a topic of profound thought and reflection in the humanities. Meanwhile, the contrast between being human versus technological/scientific invention has come to the forefront of research with the global advance of communications technologies (e.g. artificial intelligence). Scholars have pointed out that reader and author are co-creators as both are needed to make a text come alive. Similarly, both user and researcher are needed to create knowledge. Thoughts and ideas that change us as individuals and communities breaking down assumptions, barriers and prejudices while advancing development are co-created.

An understanding of this co-creation is embedded in indigenous knowledge systems. What is useful for the individual and society is conveyed through multiple forms of communication, including painting, dance, ritual and tradition, as well as written and spoken texts. Significantly, this starts with the community's need for knowledge that is then selected and encoded for current and future generations to retrieve and activate for themselves. The retrieval is often given a status and significance of its own through an elder's teaching or cultural events within the family or community. This reversal of the publishing model puts the knowledge-user first.

New means of communication have brought into contact different forms of governance of knowledge, and we need to recognize the contribution of each to the work of development. Specifically, we need to develop a more flexible publishing system and international legal frameworks to put the knowledge-user and co-creator at the forefront.

---

## Reference

Science Europe. 2018. *Plan S Making Full and Immediate Open Access a Reality*, <https://www.coalition-s.org/> (Accessed October 2019)