

## 2 Democratization of Access

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At 10:56 p.m. on 20 July 1969, a “giant leap for mankind” was made by Neil Armstrong. He stepped on the moon from the lunar ensemble ‘Eagle’, an astronaut of the first manned flight of the Saturn V rocket. He left behind an American flag and a plaque. It read “Here man from the planet earth, first set foot upon the moon. We come in peace for all mankind”. Half a billion people watched the awe-inspiring achievement on television.

We have made stupendous leaps in knowledge from that spectacular moment to this present time. Knowledge breakthroughs have occurred not only in outer space but on earth as well. MIT’s tiny roboclam digs underwater seabeds to implant anchors for giant ocean liners [1]. Tesla has produced the world’s first ever premium all electric sedan [2] and Airbus’ flying car Vahana made its maiden flight just recently in Oregon [3].

So what is the difference between our past moments of glory and the present times? It is in the amazing levels at which knowledge grows and is disseminated through the world wide web. It took about a hundred years from the first tentative telescopic photographing of the moon to the actual landing. But the last ten years of this millenium have been crowded with similar landings on Titan (2005), the giant asteroid Vesta (2011) and the dwarf planet Ceres (2015). A consumer car, the Falcon Cherry [4], has been sent to space this very year. This knowledge revolution has gone hand in hand with a phenomenal rate of knowledge dissemination, and a special internet version of it called ‘open publishing’ has taken the world by storm.

This relatively new idea means research data is offered freely to the public to download, disseminate or use without legal, financial and technical restrictions. It is undertaken through journals, e-books and dissertations. Open access has turned the world on its head, with the number of journals offering open access almost doubling from 2000 to 4400 in just two years [5]. The shift from commercial to academic and individual initiatives in the publishing field means that a lone researcher in a shack somewhere in the third world could access a wide range of international data on everything from global warming to AIDS research. Old knowledge can be reinvented and new insights obtained. Intellectual borders could be crossed at high speed with less of the friction paying research entails. Scholars in metadata harvesting and interdisciplinary research could benefit greatly from open access portals. Scholarly institutions practicing the ‘open’ paradigm can heighten their

profiles, save on internal expense and create brand awareness for themselves and their members.

But what exactly is the greatest benefit of open publications? Personally for me, it is the democratic access and the levelling of the playing fields for all that really matters. As Margaret Fuller, the renowned 19th century philosopher aptly said, "If you have knowledge let others light their candles in it." Knowledge therefore is meant to be given and not hoarded. Many in the third world have financial fuel tanks that run on 'empty' or 'near empty'. As a developing world researcher myself, I am quite familiar with this scenario. My father, with sheer hard work and a meager salary, ran a ten member household, putting five children through university almost simultaneously. The sound of squalling babies and cats rummaging bins was a common scene then and even now, as I access open data on my aged computer. The constraints are certainly there.

So as we run at stellar speed for achievements in outer space or closer to home, we could achieve touchdown I say, through open web access. It could provide a leg up for those who run on 'empty' or 'near empty'. As I peruse ethnographic data (my specialty), accounts of science teaching in remote locations like Bhutan or in the public schools of New York all become a reality. The cool mountain air of Bhutan and the noisy chaos of American high schools are there on my laptop for me to fathom and decipher. There is an understanding, a fellowship and camaraderie, an exchange of communication between faraway participants that would have been near impossible if the financial constraints of closed publishing were firmly in place. There would have been less probing, less depth and scope in my research, less academic connectivity, and less citations for my fellow global scholars.

In summary, I reiterate that open access addresses cultural conditions in scholarly research in fields ranging from space exploration to the more pressing areas of poverty, housing and economic development. It reduces institutional and personal deficits for those who cannot pay for research products on a daily basis. It democratizes intellectual gain. It speeds dissemination of scholarly output by reducing the friction of paid publishing methodologies. The elitist nature of web research, with greater gains for those with greater capital, and less advantages for those with less, will become a thing of the past as open publication concepts catch fire. Therefore, those who endorse and propagate the open access paradigm should be respected for it. In concluding, I quote the fourteenth Dalai Lama of Tibet, "Share your knowledge, it is a way to immortality".

## References

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