STEPPING OFF THE SHOULDERS OF GIANTS

ABSTRACT

Michal Shur-Ofry*

The year was 1982 when Dan Shechtman, a then junior scientist in the field of materials science, discovered a quasi-periodic crystal. This discovery was not merely novel. It stood in sharp contrast to the then prevailing scientific belief which explicitly denied the existence of quasi-crystals. It went against the textbooks in the field of crystallography and contested the position of the prominent scientists of the period. Shechtman published his findings. In so doing he was stepping-off the shoulders of giants. And the giants reacted. Shechtman was sent to re-read the textbooks, and was later asked to leave his research team. Linus Pauling, a two time Nobel laureate, was reported to declare that "there is no such thing as quasicrystals, only quasi-scientists". For many years Shechtman was the subject of contempt and ridicule. In 2011 he won the Nobel prize for his discovery.

This paper uses the story of Dan Shechtman as a starting point for exploring the metaphor of the "Shoulders of Giants". The perception that we are all standing on the shoulders of giants has become a most common image in IP scholarship, partly as a counter-reaction to the powerful image of "the romantic author". Unlike the romantic view of authorship, the shoulders-of-giants perception emphasizes the cumulative and incremental nature of creativity and innovation and is generally used to justify a restrictive approach to the scope of IP protection.

This paper argues that romanticizing the giants, just like romanticizing authors, carries a social price. Relying on socio-cultural studies of creativity as well as on philosophy of science literature, the paper explores an embedded socio-cultural preference for the conventional and incremental, and a parallel difficulty to appreciate and absorb works and innovations that break up with convention or dispute existing paradigms. Just like the author effect, this bias—which I term "the giants effect"—can potentially harm innovation. The paper then continues to explore the potential ramifications of these insights for the field of IP. It inquires whether IP theory and doctrine can facilitate "stepping off" and whether it is possible to de-romanticize the giants without harming the prevalent need to stand on their shoulders.

* Hebrew University of Jerusalem, Law Faculty

1 In crystallography, a quasi-periodic crystal refers to a structure that is ordered but not periodic.