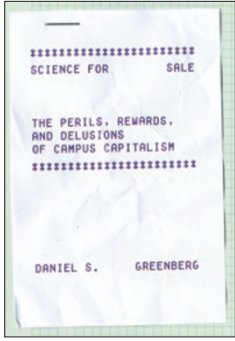


BOOK REVIEW

The commercialism of academic research



Science for Sale: The Perils, Rewards and Delusions of Campus Capitalism

Daniel S. Greenberg

The University of Chicago Press, 2007
324 pp., hardcover, \$25
ISBN: 978-0-226-306254

Reviewed by: Donald P McDonnell

In the epilogue of his latest book, Daniel S. Greenberg spins a fictional account of the rapid ascendancy of the University of Avarice and its subsequent fall from grace when its less-than-proper financial dealings involving the commercialization of its academic research are made public. Although intentionally satirical, this account encapsulates many of the perceptions that exist about the influence of commercialism on academic research and highlights the financial pressures that universities currently endure. Thus, this section could just as easily serve as the prologue, as it sets the stage for this well researched, timely book.

The book is organized into three distinct sections that describe a history of a number of academic discoveries and their commercialism, give real-life stories that highlight how commercialism has affected the lives of selected academics and offer a few ideas to mitigate potential personal and institutional conflict of interest issues arising from such commercialism.

In reading the first part of this book, I was left with the idea that some dramatic change in the way that universities operate has occurred in recent years, generating an insatiable appetite for money. Specifically, Greenberg paints the picture of an arms race of sorts at academic institutions as they undertake more and more ambitious infrastructure projects, hire more expensive faculty and staff, and engage in paradigm shifting initiatives. With funding for these activities becoming scarcer, it becomes clear that the commercialism of science and the fostering of lucrative industry-academic partnerships is inevitable. Certainly, this has occurred. Surprisingly, however, Greenberg has found in his research that, with a few well publicized exceptions, industrial support for academic research represents less than five percent of the total budgets of most universities. Thus, although this level of support will still require oversight, it is unlikely that it will substantially affect the way universities do business. It is also not clear whether the commercialization of technologies developed within universities has had any impact on the scientific process and academic freedom. Nonetheless, the passing of the Bayh-Dole Act (1970) facilitated the commercialization of federally

funded research, resulting in universities being more active in the creation of spin-off companies and in procuring licensing deals. However, as with research support, the magnitude of the financial benefit from these activities is far smaller than one would believe, given the press these relationships have received. In short, whereas most universities currently have offices of 'licensing and venture', few, as determined by Greenberg, cover their own expenses. Regardless, Greenberg has provided a useful and very thorough consideration of the pros and cons of industry-academia relationships, entrepreneurship in the academic environment and the impact of the Bayh-Dole Act. However, he gets bogged down with a heavy emphasis on human subject research, the development of institutional review boards and the problems associated with self-regulation. So, although most of the discussion is interesting, Greenberg too frequently digresses and intermingles issues that have more to do with responsible conduct of research than they do with any conflict of interests related to commercialism.

The second part of the book is composed of edited transcripts of conversations with stakeholders in the industry-academia discussion. Not to give too much away, one discussion is worth mentioning—that with William Wold at St. Louis University. Wold used to hold the positions of departmental chairman and chief executive officer of a small biotech company. What was so unusual about the relationship was that the company was based in a laboratory adjacent to Wold's 'academic' laboratory, with little separation between the two. Starting out, I was of the opinion that this type of relationship should never be allowed, but as Greenberg peeled away the layers of the onion, it was clear that many elements of this relationship, although unusual, made perfect sense. However, because of the appearance of a conflict of interests and fears that it would not pass the headline news test, the university dismantled this functioning relationship, and the company was spun off into a separate entity in which the university maintained a financial interest. Although this is an exceptional case, Greenberg uses it to point out that appearances are reality and that, although this relationship was well managed, the perception of conflict led to it being terminated. The general tone of this section of the book is that commercialism is not a bad thing, but the erring ways of a few have raised doubt as to its place in academia.

In the final section of the book, where fixing the system is the general theme, Greenberg offers little insight, spending more time discussing scientific misconduct than he does issues of conflict arising from the commercialism of research. Predictably, he emphasizes the need for full disclosure in all financial dealings between investigators, academic institutions and outside commercial interests. However, he does not discuss the impact of the huge regulatory burden that this places on institutions and the fact that those intent on deceiving will rarely be identified by these bureaucratic measures.

Greenberg's research and selection of interviewees is commendable. The product is an entertaining historical review of the commercialism of science and its perils, although it falls short of being an authoritative treatise of this complex issue.

COMPETING INTERESTS STATEMENT

The author declares competing financial interests: details accompany the full-text HTML version of the paper at <http://www.nature.com/naturemedicine/>.

Donald P. McDonnell is in the Department of Pharmacology and Cancer Biology, Duke University Medical School, C259 LSRC, Research Drive, Durham, North Carolina 27710, USA.
e-mail: Donald.mcdonnell@duke.edu