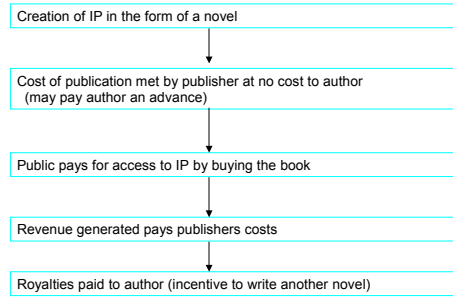


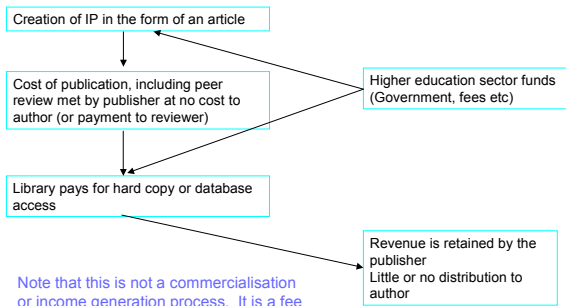
The impact of technology on knowledge diffusion

Making the Most of Creativity: In the Public Interest
 Sydney February 2006

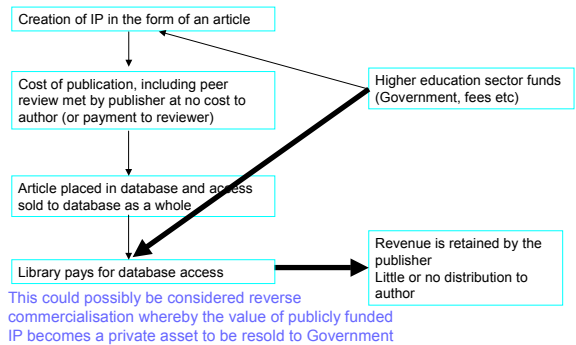
The publication process



The serials process



The oligopoly serials process



Effect of technology on integration of information and access

- In the print world, there was largely a separation between
 - the information (books, journal articles)
 - means of access (library holdings, library catalogues)
- With the latter being largely in the hands of publicly funded institutions
- Currently much information is held by large publishers and is accessed via technical means controlled by those publishers
 - This includes the search mechanisms by which you find out that certain material actually exists
- Phenomena such as Google Scholar may herald a large scale movement back to a separation between information and access
- Is a 'free' service like Google the same as a publicly funded service?

The scholarly impact occurs before 'publication'

- In many disciplines scholars are making very significant use of electronic means to both access and disseminate research findings
- The effect is that the actual scholarly impact of research increasingly occurs in a quite separate world from publication in a refereed journal
- By the time an article appears the content has been assessed and utilised by other scholars in the field
- Journal publication places an official seal on this process for promotion and formal recognition purposes
- There is a separation between the principal purpose, knowledge generation, and the ancillary purpose, academic recognition
- (http://www.dest.gov.au/sectors/research_sector/publications_resources/profiles/chanqing_research_practices.htm)
- How do existing reward/recognition systems catch up?

Sharing of data?

- Increasingly all stages of research are electronically mediated
- Potentially this massively facilitates rich information exchange
 - And offers entirely new opportunities for research
 - For example, allowing geographic, epidemiological, demographic and social policy datasets to be utilised for integrated research projects
- Some action but what are the barriers?
- Meanwhile many data sets are dying or about to die?

Implications for Government?

- Governments have an interest in publicly funded research having a beneficial impact on society, particularly on the economy
- Good dissemination of research results is crucial to this, whether dissemination is to the scholarly community or to a potential investor
- Therefore we have an interest in efficient and effective dissemination of all research information
- This stuff is important and we need to understand it better

More specifically?

- On the policy side we need to look at principles of IP management and the guidance given to research grant recipients on data and publication
 - And to consider carefully how to deal with the new forms of scholarly impact in the Research Quality Framework
- On the implementation side, we have spent some \$100m in recent years to upgrade the electronic infrastructure for research
- Currently consulting on how to use the \$500m available in 2006-20011 under the National Collaborative Research Infrastructure Strategy most effectively

(http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/ncris/default.htm)