Publishing journals today and for the future

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This document is part of a collection of presentations with a focus on Electronic Publishing. For full details of this and the rest of the collection see the cover sheet at: http://humbox.ac.uk/3078/

Overview

- About HighWire
- I've got all this content…
- Discoverability:
  - Web 2.0, Findability & Availability, New Devices & Channels, Accessibility
- Profitability:
  - Via traditional routes
  - Open access
  - Usage statistics
- Content matters
  - Digital preservation
- What's next?
  - eBooks
  - Print on demand/custom publishing
  - Semantic web

About HighWire

- We do not publish our own content but are an e-publishing platform, since 1995
- A division of Stanford University Libraries
- Largest not-for-profit publisher in the world
- ~1400 publications from over 140 publishers
  - Journals
  - Books
  - Databases
- About half are STM*, half are SSH**
- We host 71 of the 200 most frequently cited journals
- Launched new platform, H2O, in 2008

*scientific, technical and medical

**social sciences and humanities

About HighWire

- About HighWire
- **I've got all this content…**
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  - Semantic web

I’ve got all this content…

- What do I do with it??

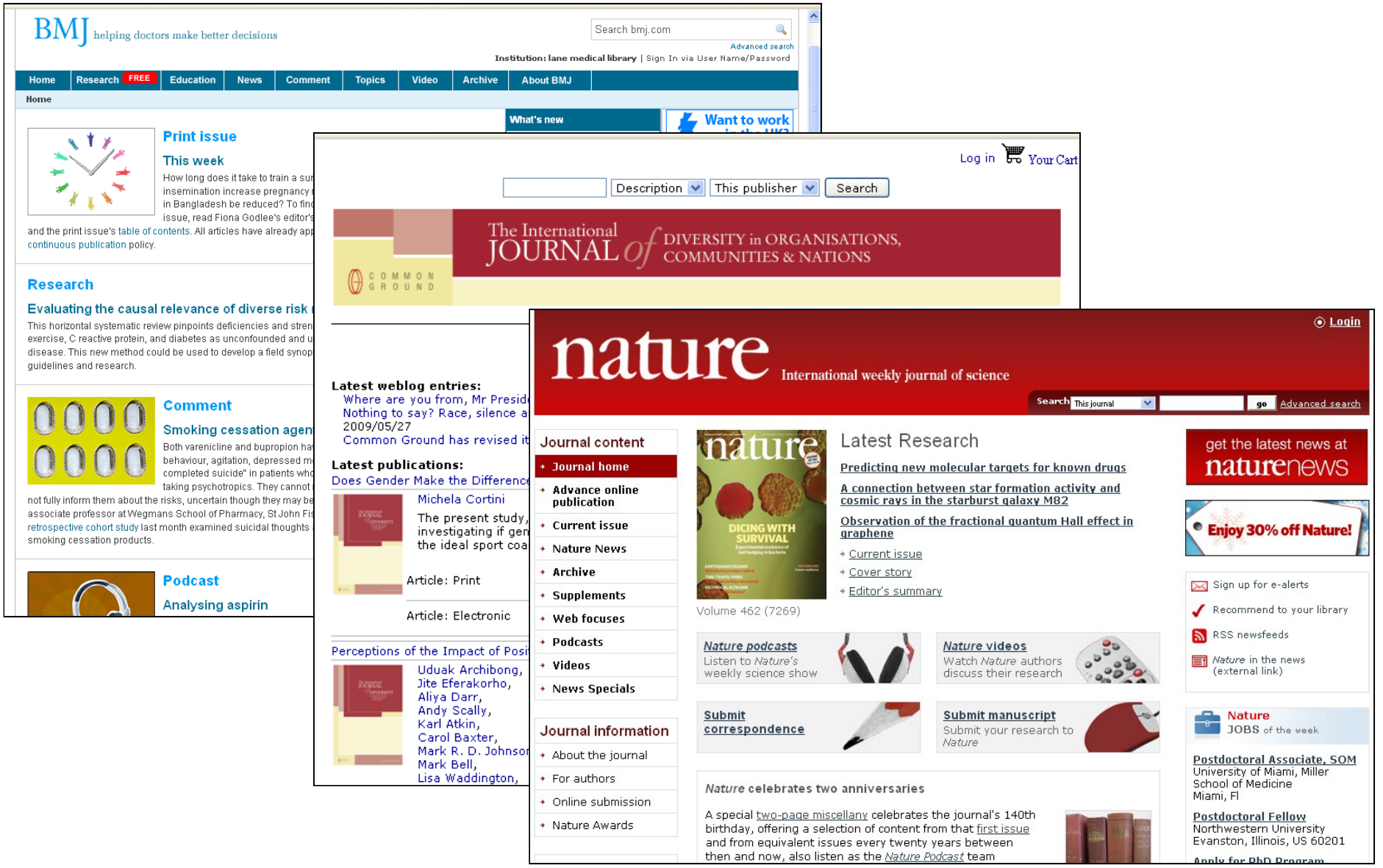
I’ve got all this content...

- In less than 30 years, journals have changed...

From paper...


BMJ
7 July 2007 | bmj.com
ADVANTAGES OF LIQUID BASED CYTOLOGY
PLUS Should families own genetic information?
Patient engagement
Management of smoking cessation
The International JOURNAL of DIVERSITY in ORGANISATIONS, COMMUNITIES & NATIONS
The Equity Scorecard: An Effective
Assessing Diversity
Abbie Robinson-Armstrong, Dere
David Killoran and Matthew X
nature medicine
OCTOBER 2008
www.nature.com/naturemedicine
Lasker Medical Research Awards 2008

To online...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What's new
Want to work
Print issue
This week
How long does it take to train a sur
insemination increase pregnancy
in Bangladesh be reduced? To find
issue, read Fiona Godlee's editor's
and the print issue's table of contents. All articles have already app
continuous publication policy.
Research
Evaluating the causal relevance of diverse risk
This horizontal systematic review pinpoints deficiencies and stren
exercise, C reactive protein, and diabetes as unconfounded and u
disease. This new method could be used to develop a field synop
guidelines and research.
Comment
Smoking cessation agen
Both varenicline and bupropion ha
behaviour, agitation, depressed m
completed suicide" in patients who
taking psychotropics. They cannot
not fully inform them about the risks, uncertain though they may be
associate professor at Wegmans School of Pharmacy, St John Fis
retrospective cohort study last month examined suicidal thoughts
smoking cessation products.
Podcast
Analysing aspirin
Log in
Your Cart
Description
This publisher
Search
The International JOURNAL of DIVERSITY in ORGANISATIONS, COMMUNITIES & NATIONS
COMMON GROUND
Latest weblog entries:
Where are you from, Mr Presid
Nothing to say? Race, silence a
2009/05/27
Common Ground has revised it
Latest publications:
Does Gender Make the Difference
Michela Cortini
The present study,
investigating if gen
the ideal sport coa
Article: Print
Article: Electronic
Perceptions of the Impact of Posi
Uduak Archibong,
Jite Eferakorho,
Aliya Darr,
Andy Scally,
Karl Atkin,
Carol Baxter,
Mark R. D. Johnson
Mark Bell,
Lisa Waddington,
Login
nature
International weekly journal of science
Search
This journal
go
Advanced search
Journal content
Journal home
Advance online publication
Current issue
Nature News
Archive
Supplements
Web focuses
Podcasts
Videos
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Journal information
About the journal
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A connection between star formation activity and cosmic rays in the starburst galaxy M82
Observation of the fractional quantum Hall effect in graphene
Current issue
Cover story
Editor's summary
Volume 462 (7269)
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Nature celebrates two anniversaries
A special two-page miscellany celebrates the journal's 140th birthday, offering a selection of content from that first issue and from equivalent issues every twenty years between then and now, also listen as the Nature Podcast team
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Postdoctoral Associate, SOM
University of Miami, Miller School of Medicine
Miami, Fl
Postdoctoral Fellow
Northwestern University
Evanston, Illinois, US 60201

I've got all this content...

- In less than 30 years, journals have changed from print to online
- The pace of change isn't showing any signs of relenting
  - user needs are changing e.g. more precise information and faster
  - new audiences e.g. the developing world
  - new platforms e.g. iPhone, Kindle and more
  - new formats and
  - new hosting models
- Your content needs to be out there!
- How do publishers create and maintain an online presence?

I’ve got all this content...

- And you need to have an online presence
- Need to leverage your content to make money
- Need to meets the demands/needs of:
  - co-owning societies
  - publishing boards & management
  - librarians
  - existing and new subscribers
  - researchers
  - authors
  - aggregators

I've got all this content...

- Scan it, digitise it
  - Outsource it!
- Ensure it adheres to standards to futureproof it
  - NLM XML etc
- Market, advertise, sell your offering
  - Sales teams, Marketing depts
- Link it
  - Interlink with other platforms and content, put it about, entice!
- Be a gateway to your content not a guardian

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Discoverability

- The Web changed the world, Web 2.0 changed browsing and online expectations
- Web 2.0 allows users
  - to collect, group and link to existing content in new ways, e.g. Connotea, Mendeley
  - to create communities around common interests, e.g. Facebook
  - to generate their own content around core material e.g. Amazon user reviews
- We **expect** to be able to reuse, add to, comment on, push, post, discuss, to copy, to own!
- HighWire developed H2O to facilitate this
- Content needs to be findable and available on **many devices and channels**

Findability & Availability

- Name some ‘mobile’ devices

Mobile devices

Media Rec/Play

eReaders

Smart Phones

Cell Phones

Handheld Games

Mobile Computers

16

Findability and Availability

- New information channels...

New Channels

HighWire

Storefronts

iTunes 8

amazon.com

Google books

NEWSSTAND

E-Channels

Blogs

twitter

bing

Widgets

Wikis

Mobile Devices

Communities

facebook

sermo

LinkedIn

myspace.com

Multimedia

YouTube

SciVee

Google images

Podcasts

Print Replacement

Print-on-demand

Custom Publishing

Findability & Availability

- New information channels mean people are accessing your content in new ways
- HighWire partners with Google to enable Googlebots to **find** new content reliably
- HighWire makes sure content is searchable and indexed in major search engines
- Search engines brings approx 75% of all traffic to our sites
- 50% of **ALL** traffic goes straight to the content, skipping the home page and tables of contents

Every article has to be a home page...

- Every article view (abstract, full text, PDF) offers a snapshot of what else is avaliable
- Content is expandable and collapsible, reducing white space
- Related content is pulled in from other sources
- Improved navigation and user interaction
- More opportunities to use widgets and Web 2.0 features

An H1O article

J Physiol Volume 587, Number 21, 5025-5030, November 1, 2009 DOI: 10.1113/jphysiol.2009.179838

meeting-report

Rapid actions of oestrogen on gonadotropin-releasing hormone neurons; from fantasy to physiology?

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Oestradiol (E2) exerts critical homeostatic feedback effects upon gonadotropin-releasing hormone (GnRH) neurons to maintain fertility. In the female, E2 has both negative and positive feedback actions to suppress and stimulate GnRH neuron activity at different times of the ovarian cycle. This review summarizes reported rapid E2 effects on native embryonic and adult GnRH neurons and attempts to put them into a physiological perspective. Oestrogen has been shown to rapidly modulate multiple processes in embryonic and adult GnRH neurons including intracellular calcium levels, electrical activity and specific second messenger pathways, as well as GnRH secretion itself. Evaluation of *in vivo* data suggests that there is no essential role for rapid E2 actions in the positive feedback mechanism but that they may comprise part of the negative feedback pathway. Adult GnRH neurons are only likely to be exposed to E2 from the gonads via the circulation with appropriate physiological E2 concentrations in the rodent being 10\#8211;50 pM for negative feedback ranging up to 400 pM for positive feedback. Although most studies to date have examined the effects of supraphysiological E2 levels on GnRH neurons, there is accumulating evidence that rapid E2 actions may have a physiological role in suppressing GnRH neuron activity.

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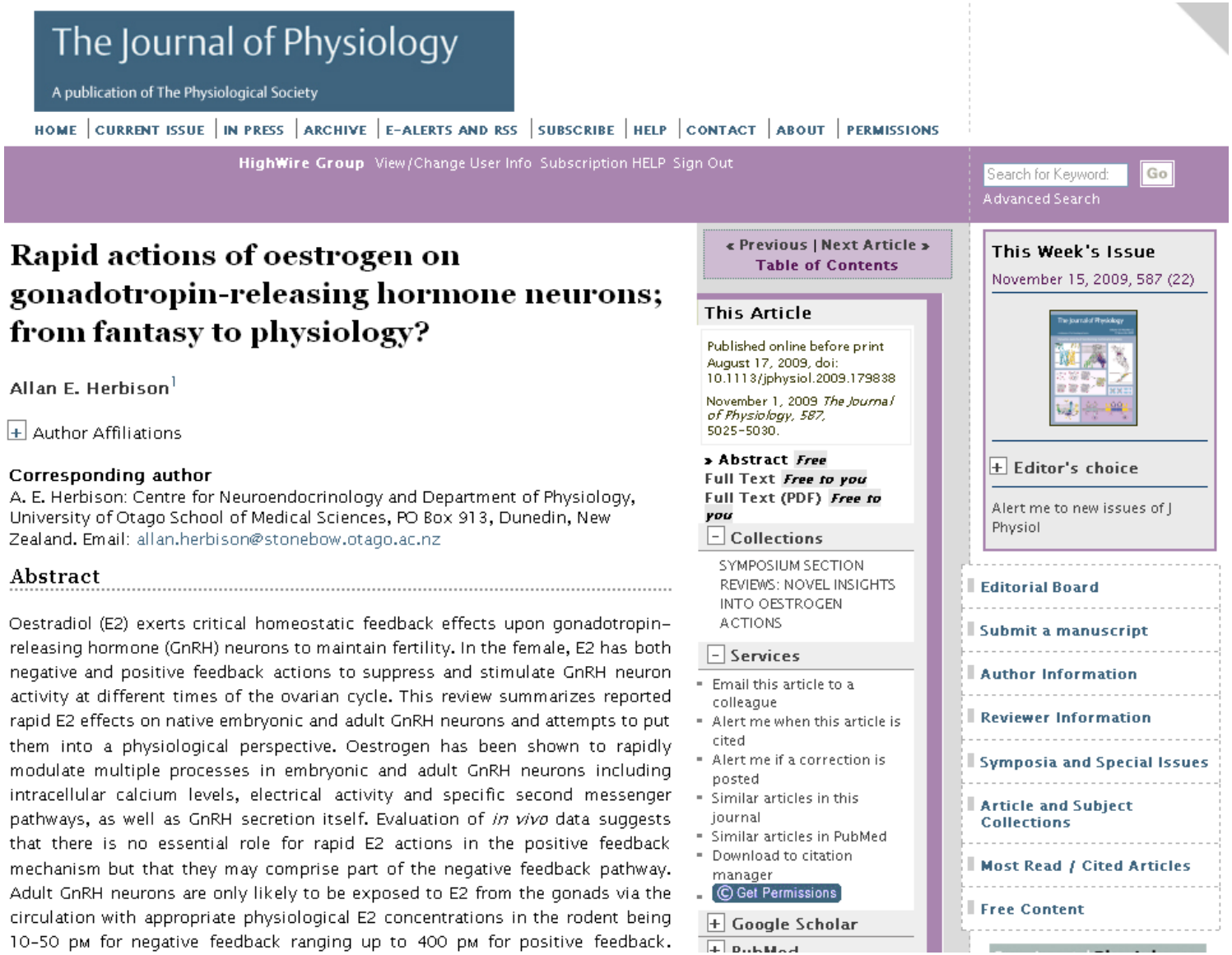
This review was presented at *The Journal of Physiology* Symposium on *Novel insights into oestrogen actions*, which took place at The Physiological Society Main Meeting in Dublin, Ireland on 8 July 2009. It was commissioned by the Editorial Board and reflects the views of the authors.

The same article in H2O



Accessibility

- Web accessibility guidelines: W3C+
- HighWire sites must meet minimum accessibility standards in USA (ADA*) and UK (DDA**)
  - All images have alt text
  - Optimised for screen reading
  - Strict xhtml coding
  - Clean XML
- More than making content available to people who browse in non-traditional ways:
  - Helps search engines
  - Users with low bandwidth in developing world

+World Wide Web Consortium , *American Disability Act, **Disability Discrimination Act

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- **Profitability:**
  - **Via traditional routes**
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  - **Usage statistics**
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Profitability

- Selling your content or access to your content makes money! $$$
- Traditional revenue routes:
  - Institutional subscriptions
    - Site licensing
    - IP authentication
    - Athens/Shibboleth
  - Individual subscriptions
    - User name and password
    - Pay per view and site passes (micro-payments)
    - Membership benefits
  - Copyright, reprints, permissions

Profitability

- Other ways of making money?
  - Advertising:
    - online banner ad sales comparatively poor to print. If print is on the decline...?
  - Reprints and permissions:
    - can you monitor the afterlife of a PDF?
  - Sales:
    - direct competition from the large, commercial publishers
  - Consortia:
    - institutions club together to exercise stronger buying power, bringing prices down
  - Big deals:
    - great for large publishers but squeezing out the smaller journals or content providers

But what about open access?

- The term 'open access' is often inaccurately applied to several types of content:

1. Free content
   - Is content that never had any access controls applied to it
1. Content available to the user via an institutional subscription
   - IP authentication often misleads end users into thinking content is free, even though the library has paid for it
1. Content originally funded by a public agency
   - A public funding body has funded the research and therefore it must be freely available on the web
1. Content paid for by an institution ('author pays')
   - An author's institution has paid for the content to be free immediately on publication, without embargo

Open access

- Some researchers and libraries believe that research should be 'freely' available on the web and will boycott publishers who make them pay but...
- Research also shows that those same people prefer to use a typeset, copy-edited, final version of an article rather than an author manuscript...
- ... and they like nice, easy-to-use web sites
- The cost of producing journals and sites needs to be covered

Open access

- Publishers must make money
- Publishers must continue to attract researchers and authors
- Publishers must validate their existence
- Publishers must satisfy the open access movement
- How?

Open access – the author pays

- The 'author pays' model is offered by many journals:
  - The author (institution) pays a fee for publication
  - A copy must be deposited in an open repository, such as PubMed Central, either by the author or by the journal
  - No embargo is applied to that content, either on the journal site or at PMC
  - It can be any article, agency-funded or not
  - Sometimes known as 'self-archiving'

Open access - mandated deposit

- Some research work is funded by agencies
  - NIH* in USA
  - Wellcome Trust in UK
- Theory: the work is publically funded and therefore should be freely available
- As of April 2008, a copy of the paper must be deposited in an open access repository: PMC or UKPMC
- **Either** the author **or** the journal can deposit the paper
- Can exist alongside a publisher's 'author pays' model

*National Institutes of Health

Usage statistics

- Print circulation figures used to be a solid measure of a journal's usage
- The Impact Factor* was a solid measure of a journal's importance and success

- Online usage is harder to measure but can't be ignored
- Increasingly important for online publishers who require accurate stats for stakeholders, revenue streams and for
- Institutions who require accurate stats to determine whether they spend diminishing subscription budgets on your content

** the average number of citations to those papers that were published during the two preceding years

Usage stats for the publisher

- Most traffic to HighWire sites is from search engines
- Massive increase in the number of single page accesses directly to an article → **high bounce rate**
- Publishers are combining this metric with **Time spent on site** to measure a site's success
- Every page must now be a home page (slide 20)

Usage for the publisher

- HighWire provides stats to help publishers analyse site usage:
  - Editorial usage
  - Institutional usage
  - Usage by IP
  - Subscriber usage
  - Non-subscriber usage
  - Site usage
- Publishers also use:
  - Google Analytics – a script on every page
  - 3rd party applications, e.g. HitList

Usage for the customer

- Usage by a library or site is key in determining whether or not that subscription is renewed
- Those stats must be easily available, translatable and comparable
- Prior to 2002, this was an unmanageable task
- A standard approach to usage stats was developed to allow subscription administrators to compare like-for-like stats from multiple subscriptions across different platforms
- Project COUNTER (Counting Online Usage of Networked Electronic Resources), March 2002

Usage for the customer

- http://www.projectcounter.org
- 'An international initiative serving librarians, publishers and intermediaries by setting standards that facilitate the recording and reporting of online usage statistics in a consistent, credible and compatible way'
- Electronic journals and databases must offer COUNTER stats if they are to remain serious contenders:
  - COUNTER-compliance influences whether an institution will (re)subscribe

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Content matters

- Standardise!
  - DTDs: document type definition. Can be proprietary.
  - NLM XML Journal Publishing and Book Publishing DTDs
  - DOIs: digital object identifiers – every one unique
  - PRISM: Publishing Requirements for Industry Standard Metadata
  - COUNTER
  - NISO: National Information Standards Organisation
- Metadata: is it correct? Who wants it downstream? Who has it?
- Copyright, ownership
  - Digital rights
  - Intellectual property laws
- Digital preservation

Digital preservation

- Digital content must be preserved for:
  - Reuse
  - Future sales
  - Back-up in case of catastrophe
  - Historical value
  - To provide perpetual access
- Key players: British Library, Dutch KB, Wellcome Trust, PubMed Central (NIH)
- Stanford initiatives:
  - LOCKSS: lots of copies keeps stuff safe
  - CLOCKSS: controlled LOCKSS

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What's next?

- eBooks!
- The first HighWire web site was a book – Oxford English Dictionary http://dictionary.oed.com/
- Many HighWire publishers have large book offerings that they want to put online
- The advent of digital readers and the Google Book Settlement heighten that need
- We have developed a standards-based book platform

What's next?

- New online content hosts
  - More third parties want to partner with HighWire publishers, to leverage the content:
    - Mendeley – the "Last.fm" of research articles
    - ResearchBlogger
    - DeepDyve
- Journal Usage Factor* as the new Impact Factor
- Print on demand
- Custom publishing

*usage statistics as the basis of a new metric of journal quality

What's next?

- Web 3.0, 4.0…
  - The semantic web* will affect all publishers of online content
  - Semantic tagging: xml, pdfs, others
  - Partnerships with 3rd parties e.g Access Innovations
- More standardisation
- More widgets: use and reuse of content
- More formats/platforms/channels
- More blogs, wikis, podcasts

*The Semantic Web provides a common framework that allows data to be shared and reused across application, enterprise, and community boundaries

HighWire

Stanford University

Thank You!

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