Open Access and beyond…

SciPost

Science Europe workshop *26-27 April 2017*
'Challenging the Current Business Models in Academic Publishing'

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Quench action approach to Néel-XXZ quench

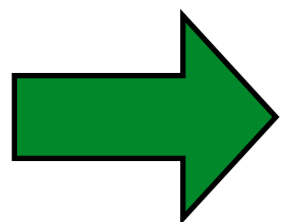## Second step: generalized TBA

B. Wouters, J. De Nardis, M. Brockmann, D. Fioretto, M.Rigol & J-SC, PRL 2014

$$\ln \eta_n(\lambda) = -2\,h\,n - \ln W_n(\lambda) + \sum_{m=1}^{\infty} a_{nm} * \ln\left(1 + \eta_m^{-1}\right)(\lambda)$$

where $\eta_n(\lambda) \equiv \rho_{n,h}(\lambda)/\rho_n(\lambda)$ $\qquad a_n(\lambda) = \dfrac{1}{\pi}\dfrac{\sin n\eta}{\cosh n\eta - \cos 2\lambda}$

and the effective driving terms (pseudo-energies) are

$$W_n(\lambda) = \begin{cases} \dfrac{1}{2^{n+1}\sin^2 2\lambda}\dfrac{\cosh n\eta - \cos 2\lambda}{\cosh n\eta + \cos 2\lambda}\prod_{j=1}^{\frac{n-1}{2}}\left(\dfrac{\cosh(2j-1)\eta - \cos 2\lambda}{(\cosh(2j-1)\eta + \cos 2\lambda)(\cosh 4\eta j - \cos 4\lambda)}\right)^2 & \text{if } n \text{ odd,} \\[2em] \dfrac{\tan^2 \lambda}{2^n}\dfrac{\cosh n\eta - \cos 2\lambda}{\cosh n\eta + \cos 2\lambda}\dfrac{1}{\prod_{j=1}^{\frac{n}{2}}(\cosh 2(2j-1)\eta - \cos 4\lambda)^2}\prod_{j=1}^{\frac{n-2}{2}}\left(\dfrac{\cosh 2j\eta - \cos 2\lambda}{\cosh 2j\eta + \cos 2\lambda}\right)^2 & \text{if } n \text{ even.} \end{cases}$$

➡ Solution of this GTBA gives steady-state

(analytically!)

But we're here to talk business...

A great model, from Scott Aaronson

I have an ingenious idea for a company. My company will be in the business of selling computer games. But, unlike other computer game companies, mine will never have to hire a single programmer, game designer, or graphic artist. Instead I'll simply find people who know how to make games, and ask them to *donate* their games to me. Naturally, anyone generous enough to donate a game will immediately relinquish all further rights to it. From then on, I alone will be the copyright-holder, distributor, and collector of royalties. This is not to say, however, that I'll provide no "value-added." My company will be the one that packages the games in 25-cent cardboard boxes, then resells the boxes for up to $300 apiece.

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But why would developers donate their games to me? Because *they'll need my seal of approval*. I'll convince developers that, if a game isn't distributed by my company, then the game doesn't "count" -- indeed, barely even exists -- and all their labor on it has been in vain.

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Admittedly, for the scheme to work, my seal of approval will have to *mean* something. So before putting it on a game, I'll first send the game out to a team of experts who will test it, debug it, and recommend changes. But will I pay the experts for that service? Not at all: as the final cherry atop my chutzpah sundae, I'll tell the experts that it's their professional duty to evaluate, test, and debug my games for free!

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On reflection, perhaps no game developer would be gullible enough to fall for my scheme. I need a community that has a higher tolerance for the ridiculous -- a community that, even after my operation is unmasked, will study it and hold meetings, but not "rush to judgment" by dissociating itself from me. But who on Earth could possibly be so paralyzed by indecision, so averse to change, so immune to common sense?

I've got it: *academics!*

Open Access policy

Budapest Open Access Initiative (2002)

Bethesda Statement (2003)

Berlin Declaration (2003)

…

Amsterdam Call for Action (2016)

My personal perspective:

extremely good **too little, too slow**

What's missing?
- **The implementation**
- **Integrated view**
- **Incentives**

Points of concern for scientists

- **accessibility of published material**
- **quality of final product**
- **usefulness of refereeing process**
- **freedom to author science honestly** (*no smoke & mirrors*)
- **form of impact assessment (***the impact of the impact factor***)**

Annoyances

- **paywalls; financial dealings**
- **refereeing not always constructive or useful**
  - **lack of editorial and referee expertise**
  - **use of non-scientific criteria**
- **journal title more important than paper's content when assessing quality and importance**

Het weekblad dat wetenschappelijke carrières kan breken

De power van Nature

ARTIKEL Wetenschappers begaan desnoods een moord om te kunnen publiceren in Nature. Hoe is dat eigenlijk het belangrijkste wetenschappelijke tijdschrift ter wereld geworden? De Volkskrant ging langs bij de redactie in Londen.

Door: Martijn van Calmthout 9 juli 2016, 02:00

'Nature is het surrogaat geworden voor serieuze kwaliteitsbeoordeling van onderzoekers.
Wij betreuren dat, omdat voor ons de nieuwswaarde voor de wetenschap voorop staat. We brengen wat nieuw en opwindend is. Het moet wel goed zijn, maar het is niet per definitie ook de beste wetenschap.'

Philip Campbell, editor-in-chief Nature

Sci|Post

What is it? **A complete scientific publishing portal**
(it's a **fully-featured publishing entity**)

Who runs it? **Professional scientists**
(it is and will remain entirely **grassroots**)

What does it offer?
- Journals
- Commentaries
- Theses links

Two-word summary?
- Openness
- Quality

Visit the website scipost.org

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What does it aim to achieve?

- **Implement true-to-spirit Open Access**
  - two-way: free for readers, free for authors

- **Decouple scientific & financial issues**
  - isolate scientists from the latter
  - remove publish-to-cash-in flaw of current APCs

- **Modernize the refereeing procedure**
  - Give more credit to referees
  - Streamline post-publication feedback

- **Reform impact assessment**

SciPost

Organisational structure:

Stichting SciPost
non-profit foundation, ANBI

Advisory Board
a dozen preeminent scientists

Editorial College
professionally active senior scientists
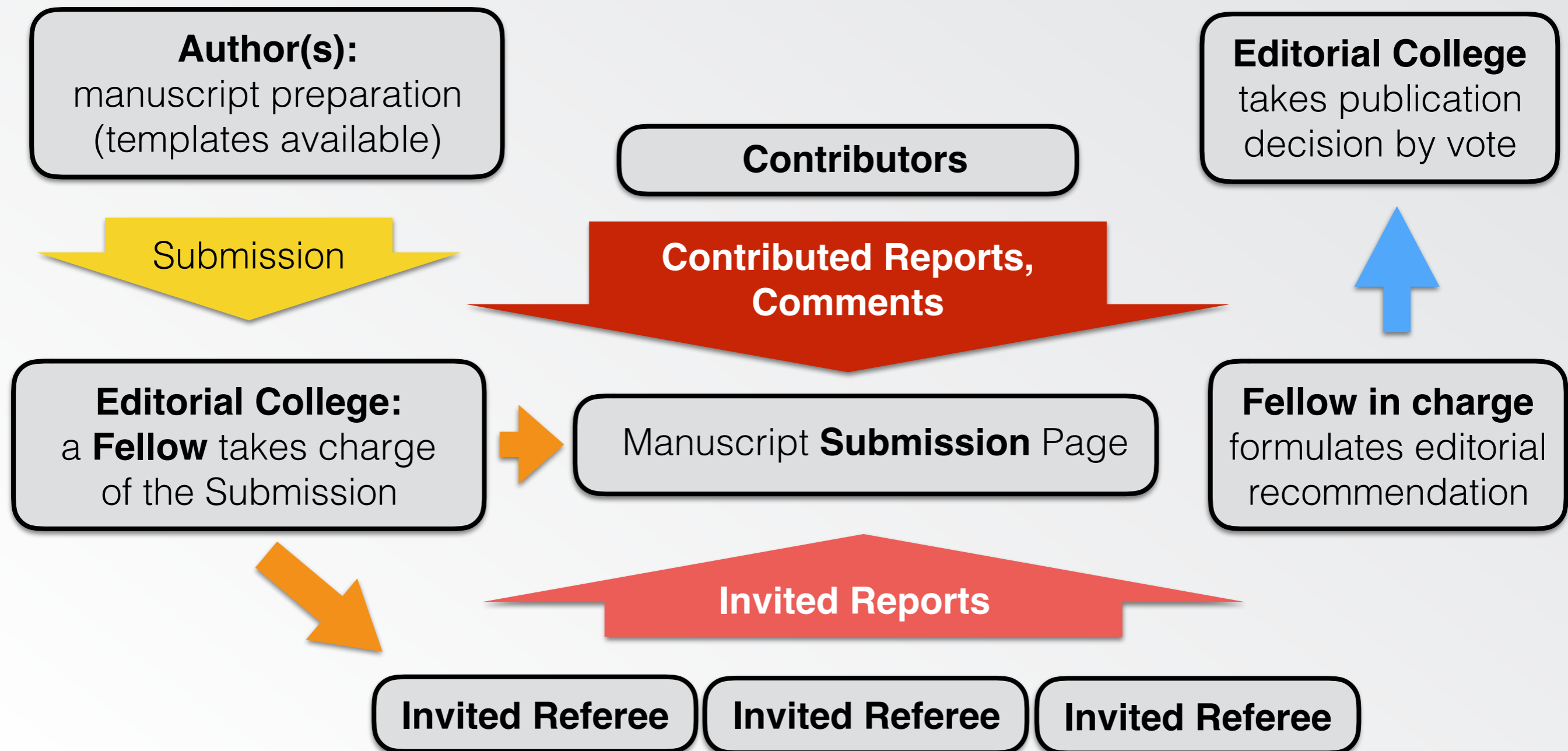(numbers scaled with operations, currently 50+)

Executive
Admin + teams of officers
running operations
- Development
- Production
- Support

Supporting Partners
Financial backbone

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Editorial flowchart: *peer-witnessed refereeing*
Inspirations: *F1000; ACP (Copernicus), PLOS…*

Author(s):
manuscript preparation
(templates available)

Contributors

Editorial College
takes publication
decision by vote

Submission

**Contributed Reports,
Comments**

Editorial College:
a **Fellow** takes charge
of the Submission

Manuscript **Submission** Page

Fellow in charge
formulates editorial
recommendation

Invited Reports

Invited Referee   **Invited Referee**   **Invited Referee**

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Doubts on APCs

- **Publish-to-cash-in incentive**
  - editorial & financial get entangled
- **Multiple authors: who pays?**
- **'Publication' is an ill-defined unit**
  - page is better, but still…
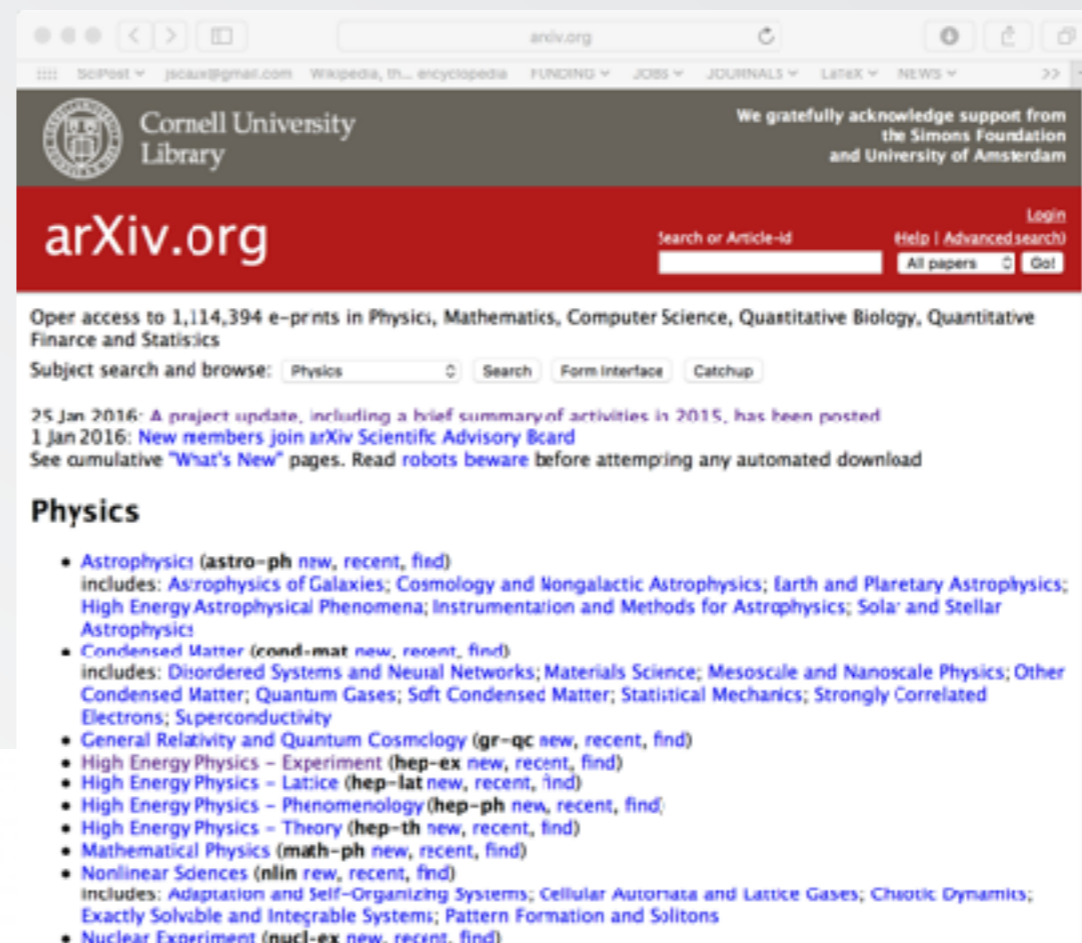 - incompatible with future forms of publishing

The risk with just 'opening up the market'

- **Top publications are 'luxury goods'**
  - people will pay insane amounts for luxury watches, diamonds and sports cars, or publications if their jobs, grants (and thus livelihoods) depend on it

You have been warned...

Much smarter: cooperative models

Inspirations:

Supporting Partners Board

- **(Inter)national funding agencies**
- **Universities & libraries**
- **Government**
- **Foundations**
- **Benefactors**

ArXiv:
- annual budget ~ $800K
- support from Cornell Univ. Library: $75K
- ~ €25K startup (thanks NWO).

Our needs:
- Running costs depend on success level.
- Partnership: ~ €1K per univ per year/domain
- Current estimate: about €300/paper average

Turning peanuts into jewels

Our immediate challenges:

- **increase awareness/acceptance from scientists**
  - this is going well: colleagues (seniors/juniors) thirsty for change
  - immobility of existing metrics is the limiting factor

- **gather concrete support from stakeholders to ensure viability (Supporting Partners)**
  - cooperative model == cheapest integrated solution
  - disruptive market player; useful negotiation trump card

Follow-up battle (actually, it's just one big battle):

- metrics and evaluation systems/methods