

# CAPES Cambridge Publishing

Simon Ross  
Deputy Managing Director  
Academic Publishing  
March 2015



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# A BRIEF HISTORY OF THE PRESS

The Press publishes its first book



1534

Henry VIII's 'Letters Patent' allows Cambridge University Press to print 'all manner of books'



1584

The first Cambridge Bible is printed by John Legate



1687

The publication of the second edition of Newton's *Principia Mathematica*



1713



1763

John Backus produces the folio Bible: one of the most beautiful Bibles ever published



1938

Albert Einstein's *The Evolution of Ideas From Relativity and Quanta*



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## The Press's activities are an extension of the University Mission enshrined in the Statutes of the University

- "There shall be in the University a University Press which shall be devoted to printing and publishing in the furtherance of the acquisition, advancement, conservation, and dissemination of knowledge in all subjects; to the advancement of education, religion, learning, and research; and to the advancement of literature and good letters."

*University of Cambridge Statutes and Ordinances*

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- All book proposals peer reviewed before presentation and discussion
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## Cambridge today - by numbers

### 3 Global Publishing Groups:

Academic, ELT, Education

- 53,000 in-print titles
- Annual output of 4,000 publications
  - 350 Journals and 1,650 new academic books
- 22% of revenues are digital
- Journals 10% Print 15% Bundled (p+e), 75% E-only
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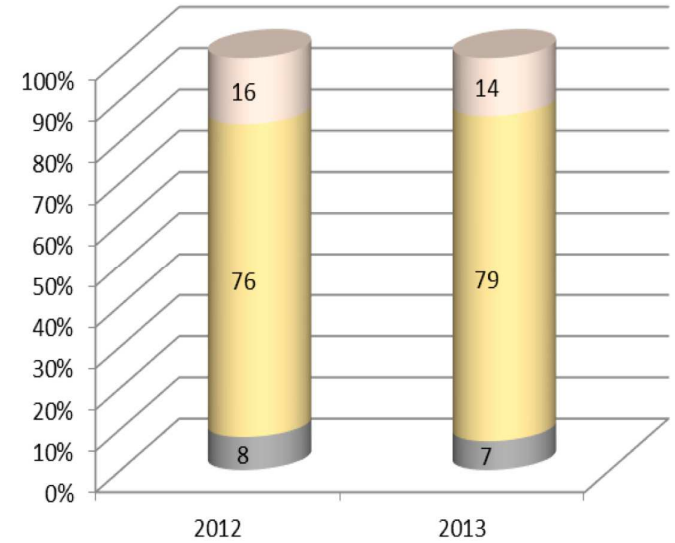
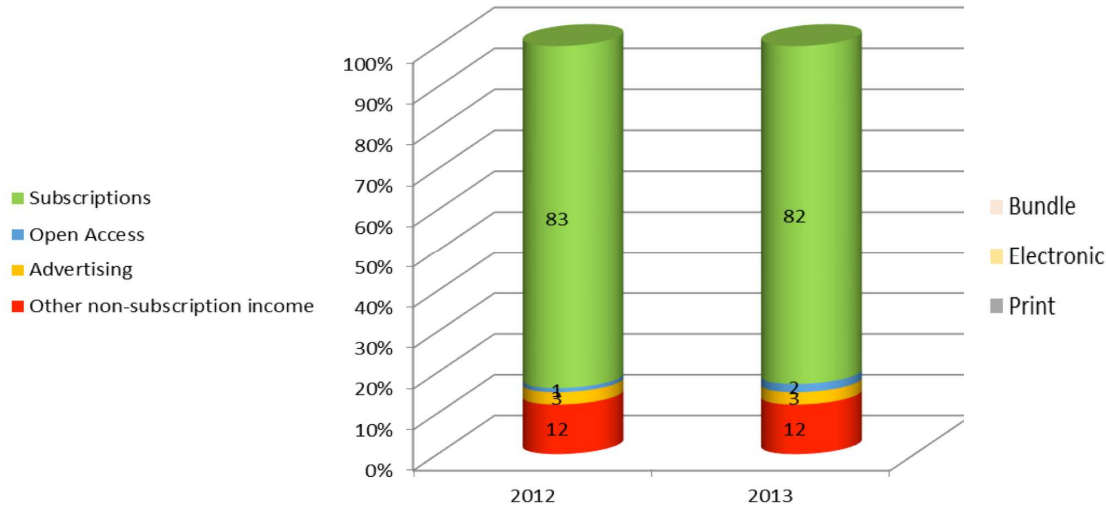
# Cambridge by numbers

- 90% of sales are made outside the UK
- 2,300 employees, with 55% of staff outside UK
- 60 offices in 40 countries, Major hubs in Cambridge, Madrid, New York, Mexico City, São Paulo, Singapore, Manila, Tokyo, New Delhi, Dubai, Melbourne and Cape Town



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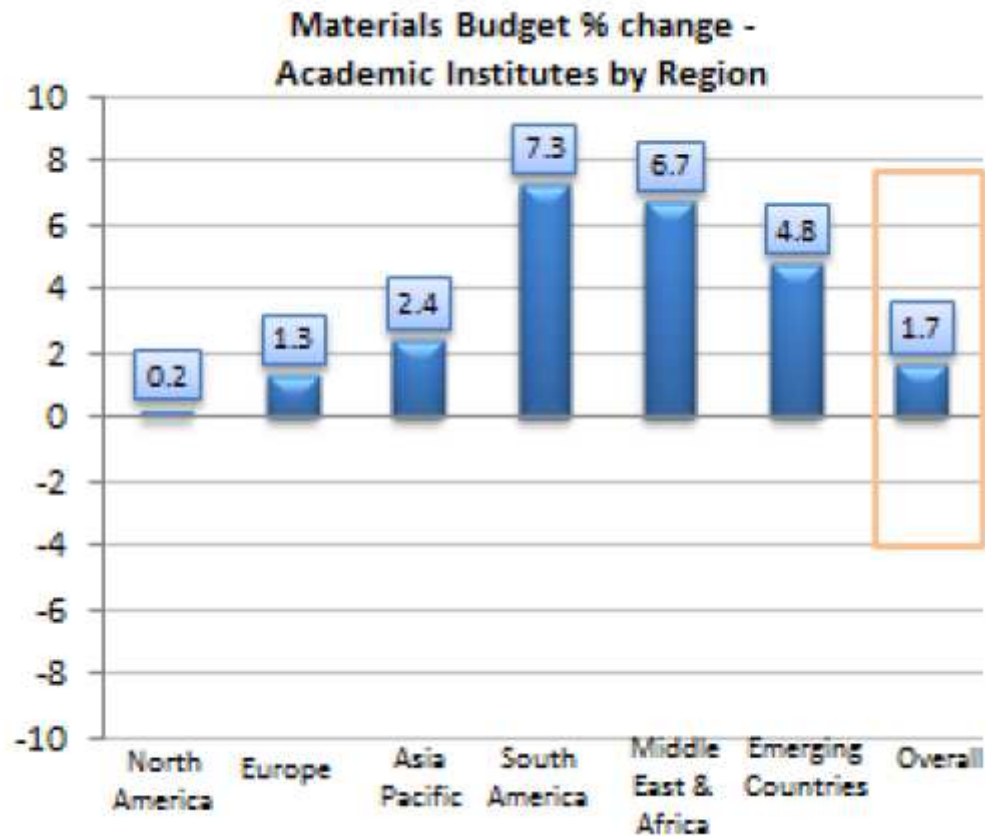


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# But market, customer and user focus now essential

- Competition and global slowing or flattening of library budgets
- Changing distribution of global research funding
- Increasing role of technology to deliver content+
- + social media, support multiple formats, different format types (data, software etc, services)
- *all integrated*
- Open Access, Institutional Repositories and the role of the library/institution
- How? *Engaging more and listening to customers and users*

# Library budgets – growth, but not much



- Survey predicts **average growth of 1.7% in academic library materials budgets in 2015** (cf. 1.4% last year)
- This breaks down into 1.9% for serials and 1.1% for books

Source: PCG library budget predictions report 2015

# Library Budget Predictions 2015

Source PCG 2015 Library Report



## North America

**Books**            **-0.5%**

**Journals:**        **0.2%**

## South America

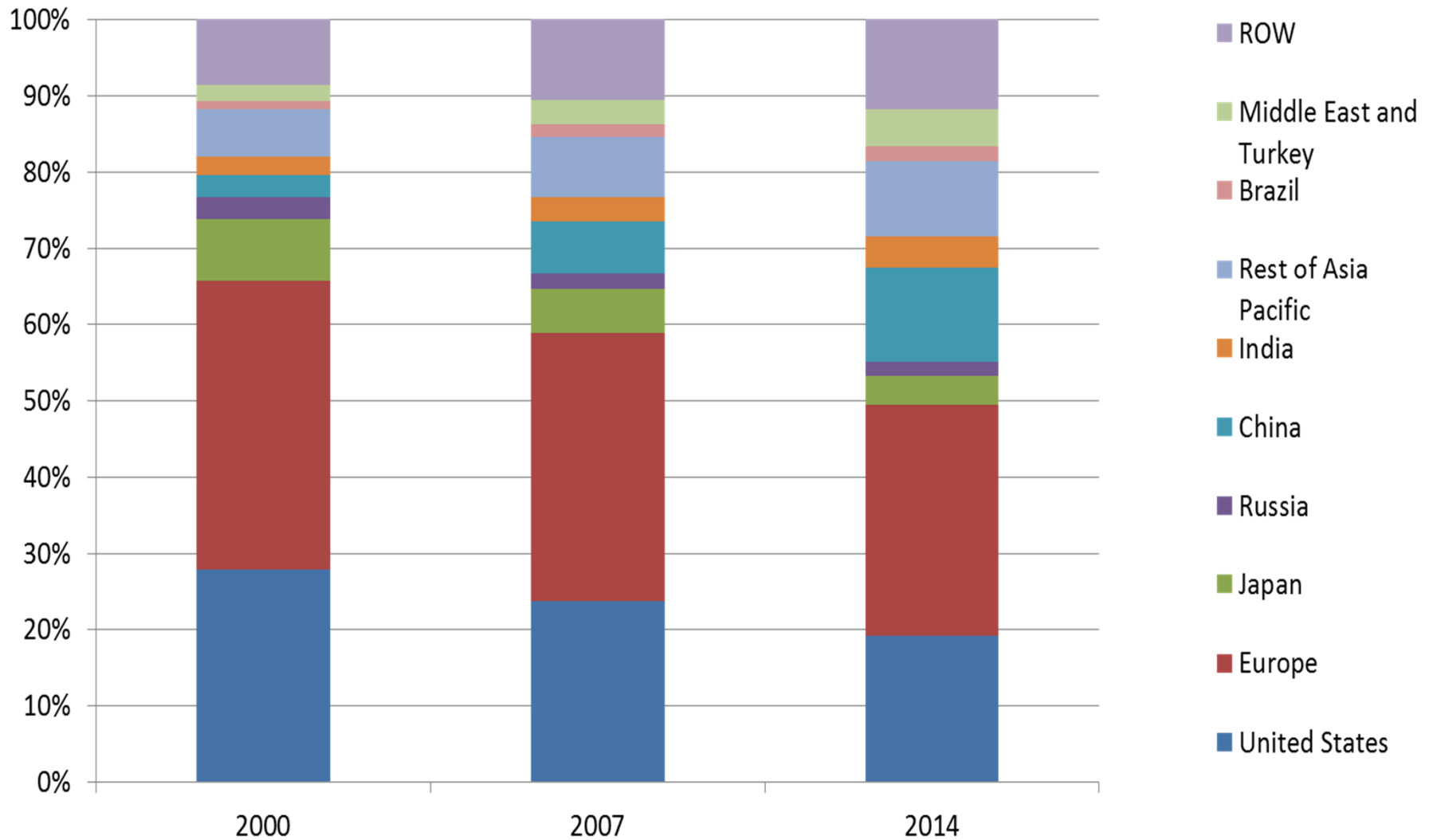
**Books**            **4.6%**

**Journals**        **5.7%**



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# Market landscape: Global Research funding

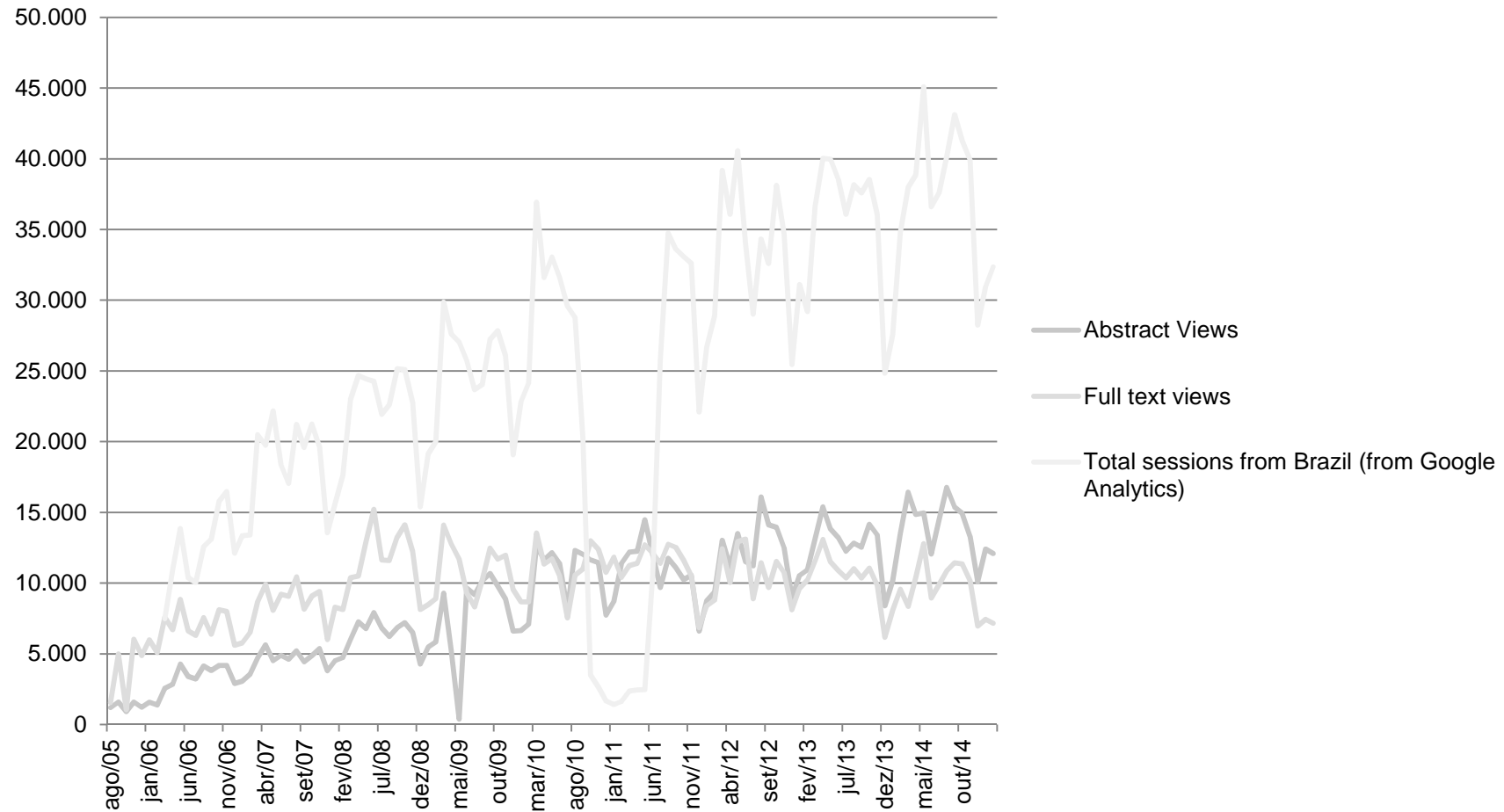




# Library panel – key themes at recent events

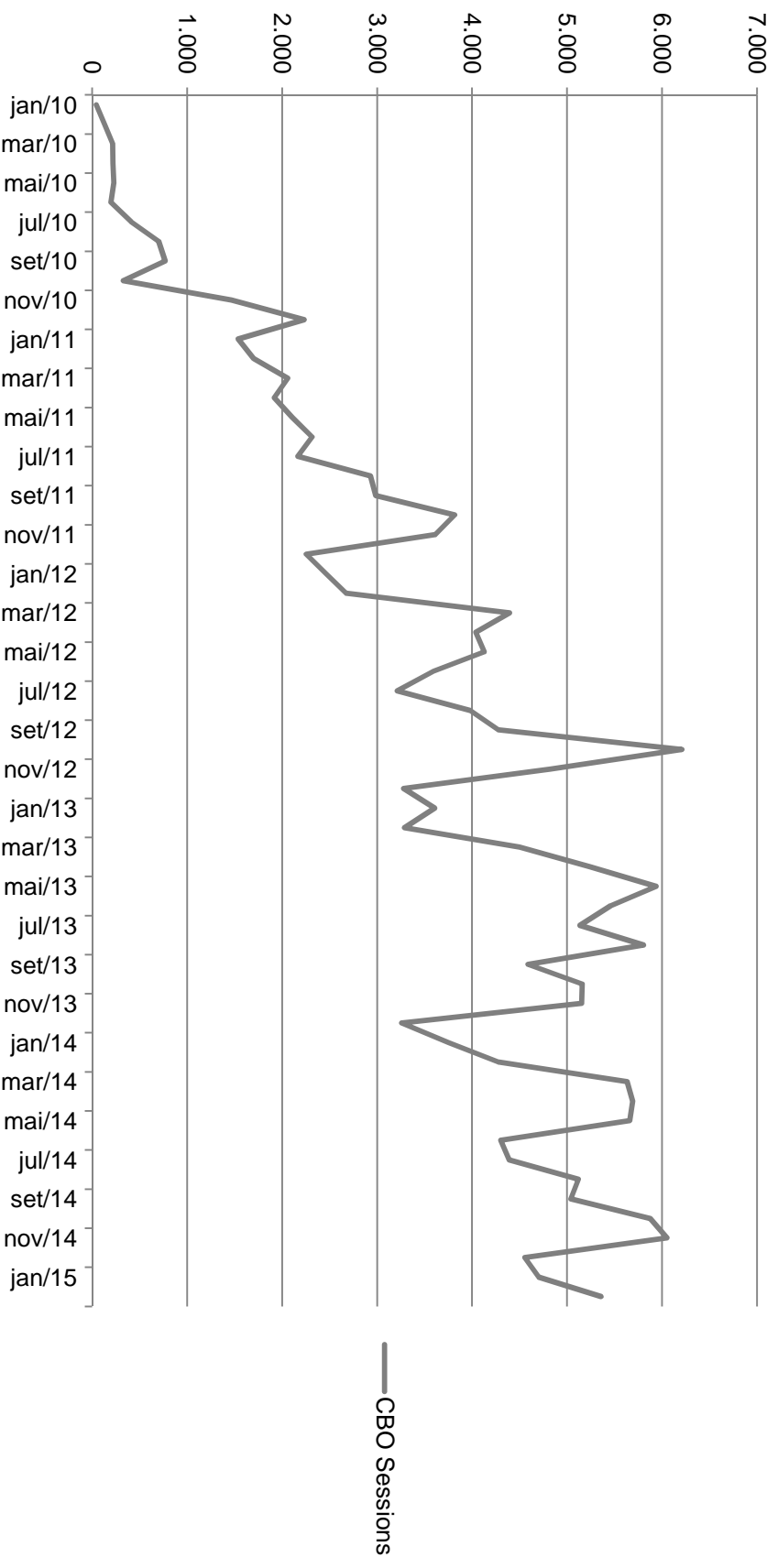
- Focus on **outcomes**: student experience, engagement, achievement
- **Metrics** used to measure value are becoming increasingly important, complex and diverse
- New purchasing is increasingly driven by **academic demand** (rather than collection building)
- **Metadata** is key to discovery, driving usage, some libraries also value marketing material and tools to drive awareness of resources
- Adoption/recommendation is increasingly important to textbook sales as reading list software drives purchasing
- Varied but growing library support in publishing research outputs
- Increasingly complex business models for purchasing, value focus
- Spectrum of engagement with OA across regions/institution types
- Institutional repositories
- Support in training end-users is appreciated

# CAPES CJO usage and CJO sessions originating in Brazil combined



# CBO sessions originating in Brazil

**CBO Sessions**



# Open Access

- 15 Pure OA, 200 Hybrid Journals
- Green OA publisher
- New OA launch: *Global Mental Health*
- Society subscription journal to OA: *Journal of Applied Agricultural Economics*
- New OA developments from existing titles
  - *Expert Reviews in Molecular Medicine*,
  - *Quarterly Review of Biophysics*
  - *Parasitology Open*
  - British Journal of Nutrition – *Journal of Nutritional Science*
- New society subsidized launch British Journal for the History of Science  
*BJHS Themes*
- Successful OA book publishing ***The History Manifesto*** by David Armitage and Jo Guldi



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# New key titles

*Paleobiology*



The  
Paleontological  
Society

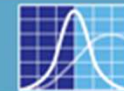
JOURNAL of PALEONTOLOGY



The  
Paleontological  
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&  
Hospital Epidemiology



SHEA  
The Society for Healthcare  
Epidemiology of America

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SDMPH

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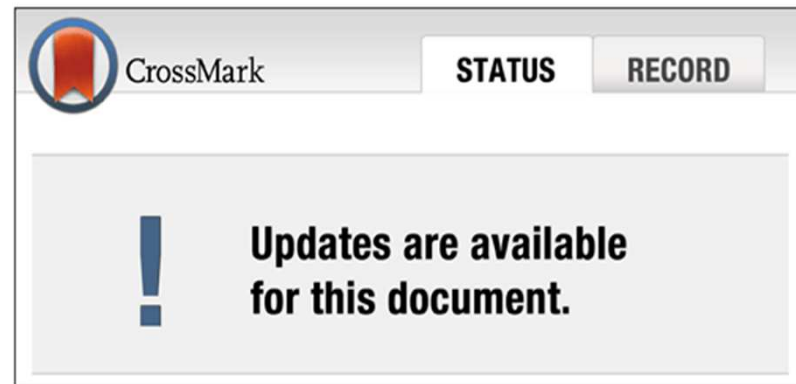
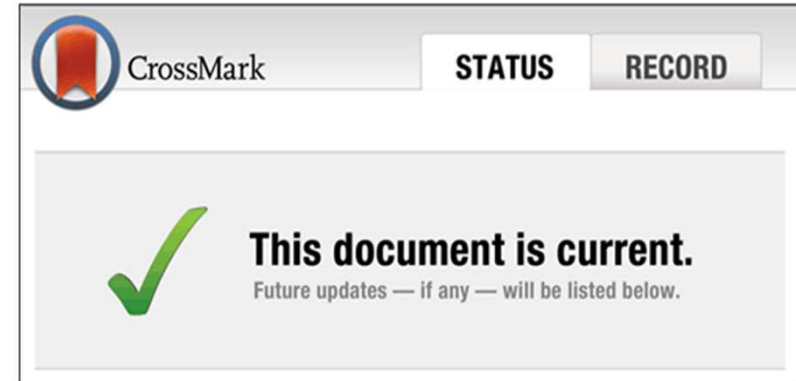
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# British Journal of Nutrition

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 C. C. Balch  
 British Journal of Nutrition / Volume 77 / Issue 04 / April 1997, pp 493-496

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British Journal of Nutrition, Volume 112, Issue 12, December 2014, pp 1923-1932

### High sodium intake during postnatal phases induces an increase in arterial blood pressure in adult rats.

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M. C. S. Moreira<sup>1</sup>, E. F. de Silva<sup>1</sup>, L. L. Sequeira<sup>2</sup>, Y. B. de Paiva<sup>1</sup>, C. H. de Castro<sup>1</sup>, A. H. Freire-Oliveira<sup>1</sup>, D. A. Rosa<sup>1</sup>, P. M. Ferreira<sup>1</sup>, C. H. Xavier<sup>1</sup>, E. Colombiana<sup>3</sup> and Gustavo R. Pedrinho<sup>1</sup> <sup>1</sup>

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DOI: <http://dx.doi.org/10.1017/S0007114514002918>  
Published online: 27 October 2014

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#### Abstract

Epigenetic studies suggest that diseases that develop in adulthood are related to certain conditions to which the individual is exposed during the initial stages of life. Experimental evidence has demonstrated that offspring born to mothers maintained on high-Na diets during pregnancy have higher mean arterial pressure (MAP) in adulthood. Although these studies have demonstrated the importance of prenatal phases to hypertension development, no evidence regarding the role of high-Na intake during postnatal phases in the development of this pathology has been reported. Therefore, in the present study, the effects of Na overload during childhood on induced water and Na intakes and on cardiovascular parameters in adulthood were evaluated. Experiments were carried out in two groups of 21-d-old rats: experimental group, maintained on hypertonic saline (0.3 M-NaCl) solution and food for 60 d, and control group, maintained on tap water and food. Later, both groups were given water and food for 15 d (recovery period). After the recovery period, chronic cannulation of the right femoral artery was performed in unanaesthetised rats to record baseline MAP and heart rate (HR). The experimental group was found to have increased basal MAP (98.6 (sem 2.7) v. 118.3 (sem 2.7) mmHg;  $P=0.02$ ) and HR (365.4 (sem 12.2) v. 398.2 (sem 7.5) beats per min;  $P<0.05$ ). There was a decrease in the baroreflex index in the experimental group when compared with that in the control group. A water and Na intake test was performed using furosemide. Na depletion was found to induce an increase in Na intake in both the control and experimental groups (12.1 (sem 0.6) ml and 7.8 (sem 1.1), respectively;  $P<0.05$ ); however, this increase was of lower magnitude in the experimental group. These results demonstrate that postnatal Na overload alters behavioural and cardiovascular regulation in adulthood.

#### Introduction

The abundance of natural, technical or even societal phenomena (Attinger et al.2013) accompanying drop impacts on solid or liquid surfaces has led to a huge scientific literature since the beginning of the 19th century (Worthington 1908). In spite of their commonness, the topics of drop impact continue to increasingly attract analytical, numerical and experimental studies, because related physical phenomena are far from being fully understood. The reader can refer to some comprehensive reviews (Rein 1993; Yarin 2006) or to a more specific recent one by Marengo et al. (2011).

Only recently has the impact of droplets onto small targets been investigated. A small target is defined as one for which the size is of the same order of magnitude as the size of the impacting drops. Rozhkov, Prunet-Foch & Vignes-Adler (2002, 2004) and Villermaux & Bossa (2011) reported on experimental and theoretical investigations of the impact of a water drop onto a small flat cylinder. These experiments were subsequently extended to complex fluids, i.e. dilute high-molecular-weight polymer solutions (Rozhkov, Prunet-Foch & Vignes-Adler 2006) or surfactant solutions (Rozhkov, Prunet-Foch & Vignes-Adler 2010).

#### Set-up and experimental methods

##### 1. Drop impact experimental set-up

Our experimental set-up is adapted from the original set-up designed by Rozhkov et al. (2002). A scheme of the set-up is shown in Figure 1. In brief, we let a liquid drop fall on a solid cylindrical target of diameter slightly larger than that of the drop. The liquid drop is injected with a syringe pump and a needle positioned vertically with respect to the target. The impact velocity of the drop,  $u_0$ , is set by the height of fall of the drop and the drop diameter,  $d_0$ , is set by the needle diameter. Three different drop diameters (0.5–3.0, 3.7 and 4.8 mm) and two impact velocities ( $u_0=2.8$  and 4.0 m

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February 2015, pp 428 - 444

## Free radially expanding liquid sheet in air: time and space resolved measurement of the thickness field

C. Vernaya<sup>1</sup>, L. Ramosa<sup>1</sup> c1 and C. Ligourea<sup>1</sup> c1

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British Journal of Nutrition, Volume 112, Issue 12  
December 2014, pp 1923-1932

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Published online: 08 January 2015

### Abstract

The collision of a liquid drop against a small target results in the formation of a thin liquid sheet that extends radially until it reaches a maximum diameter. The subsequent retraction is due to the air–liquid surface tension. We have used a time and space resolved technique to measure the thickness field of this class of liquid sheet, based on the grey-level measurement of the image of a dyed liquid sheet recorded using a high-speed camera. This method enables a precise measurement of the thickness in the range 10–450  $\mu\text{m}$ , with a temporal resolution equal to that of the camera. We have measured the evolution with time since impact,  $t$ , and radial position,  $r$ , of the thickness,  $h(r,t)$ , for various drop volumes and impact velocities. Two asymptotic regimes for the expansion of the sheet are evidenced. The scalings of the thickness with  $t$  and  $r$  measured in the two regimes are those that were predicted by Rozhkov et al. (Proc. R. Soc. Lond. A, vol. 460, 2004, pp. 2681–2704) for the short-time regime and Villermaux and Bossa (J. Fluid Mech., vol. 668, 2011, pp. 412–435) for the long-time regime, but never experimentally measured before. Interestingly, our experimental data also provide evidence for the existence of a maximum of the film thickness  $h_{\text{max}}(r)$  at a radial position  $r_{\text{hmax}}(t)$  corresponding to the cross-over of these two asymptotic regimes. The maximum moves with a constant velocity of the order of the drop impact velocity, as expected theoretically. Thanks to our visualization technique, we also provide evidence of an azimuthal thickness modulation of the liquid sheets.

### Introduction

The abundance of natural, technical or even societal phenomena (Attinger et al. 2013) accompanying drop impacts on solid or liquid surfaces has led to a huge scientific literature since the beginning of the 19th century (Worthington 1908). In spite of their commonness, the topics of drop impact continue to increasingly attract analytical, numerical and experimental studies, because related physical phenomena are far from being fully understood. The reader can refer to some comprehensive reviews (Rein 1993; Yarin 2006) or to a more specific recent one by Marengo et al. (2011).

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## Free radially expanding liquid sheet in air: time and space resolved measurement of the thickness field

C. Vernaya<sup>1</sup>, L. Ramosa<sup>1</sup> *c1* and C. Ligourea<sup>1</sup> *c1*

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Figure 1 Sketch of the drop impact experimental setup. The experimental parameters are defined on the sketch. CEDEX 05, France.

Figure 2 a) Time evolution of the thickness of a liquid sheet. Actual and normalized data are plotted for different radial positions, as indicated in the legend of (b). Inset: Representative data on a loglog scale to highlight the two asymptotic scaling regimes.

Figure 3 Sheet diameter evolution for several experiments at different We numbers as indicated in the legend. Inset:



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Coeliac disease (CD) patients may exhibit a pro-inflammatory profile and fatty acids (FA) can influence inflammation through a variety of cellular pathways in them. The aims of the present study were to (1) evaluate the FA composition of erythrocytes obtained from newly diagnosed CD patients by lipidomic analysis and compare it with that in healthy subjects and (2) determine the effects of 1-year gluten-free diet (GFD) intervention. A total of twenty CD patients (five men and fifteen women; mean age 34.0 (sem 1.7) years) were evaluated at diagnosis and after 1 year of GFD intervention. A total of twenty healthy subjects (seven men and thirteen women; mean age 40.2 (sem 2.5) years) served as controls. CD patients on an unrestricted diet exhibited a significant 2.08-fold higher concentration of arachidic acid when compared with healthy subjects, suggesting that it can be considered as a putative marker of CD. Besides, the arachidonic acid (AA):dihomo- $\gamma$ -linolenic acid ratio was 2.01-fold significantly lower in CD patients than in healthy subjects ( $P < 0.01$ ), underlying an inefficient synthesis of PUFA from their precursors in terms of desaturase activity. In addition, mainly due to lower concentrations of docosahexaenoic acid, the inflammation marker AA:docosahexaenoic acid ratio was 1.40-fold significantly higher in CD patients than in healthy subjects. After 1 year of GFD intervention, FA concentrations in CD patients were still different from those observed in healthy subjects. The lipidomic analysis of erythrocyte membranes confirmed the presence of an altered FA composition.

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