

BOOSTING OPEN ACCESS PUBLICATIONS WITH CONTENT MARKETING

Why content marketing matters to open access publications and publishers



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EXECUTIVE SUMMARY

Open access (OA) is meant to bring us closer to open science. So, what is hindering progress? The truth is, accessing the literature is only half of the story. The other half is the obstacle created by the use of specialised language in the scientific literature. An inability to understand the meaning of the research represents an even greater hindrance to open science and multidisciplinary collaboration than access to publications. The next step on the path to a more open science requires open access journals to make research articles accessible to a wider audience of specialists and non-specialists. Being open access is not enough. With thousands of open access publications available, a new approach to marketing and promotion is needed. This new approach centres on a transition from journal-led to author-led marketing and focuses on value-added content that is both engaging, understandable as well as scientifically accurate.

Whether they are open access or traditional, promoting articles through value-added content that lends itself to actions such as ‘sharing, explaining or enriching’ may increase article downloads by +23% ([PLOS ONE](#)). SciencePOD’s own estimate indicates that promoting an article through a plain language summary that is understandable to a non-specialist audience can increase downloads up to 35% (SciencePOD). Articles accompanied by video abstracts rank 33% higher than non-video articles in the same journal and 18% higher than papers published in all journals (Research Square). Moreover, articles with video abstracts are “accessed 80% more frequently than non-video articles” (Research Square). The use of infographics in marketing articles increases the rate of abstract views and influences [Altmetric scores](#), suggesting that this form of value-added content also has a role to play in increasing awareness of published scientific research.

THE IMPACT OF VALUE-ADDED CONTENT

IMPACT OF PLAIN LANGUAGE SUMMARY

+30%

increase in the number of downloads



by sharing, explaining or enriching research papers, for example with plain language summaries

IMPACT OF VIDEO SUMMARY

+80%

frequency of access



+18%

higher ranking than articles without video



USING INFOGRAPHICS

increases rate of abstract views & influences Altmetric scores



BENEFITS OF VALUE-ADDED CONTENT

Using quality value-added content such as digital stories and infographics to promote open access journals, articles and books yields the following benefits:



Raises the profile of authors and their research – contributes to publishers' author services and potentially facilitates collaboration among researchers



Responds to demands of funding mandates for dissemination, transparency and accountability



Brings attention to specific published research, journals and publications – in an increasingly competitive environment (millions of OA publications)



Can impact downloads, rankings, abstract views, Altmetrics and submission levels

HOW ACCESSIBLE STORIES CAN BREAK DOWN BARRIERS TO OPEN ACCESS AND OPEN SCIENCE

Open access (OA) is meant to bring us one step closer to open science. But the lack of widespread adoption of OA is often blamed for slowing down research progress. According to the European Commission, '[open access](#) to publications refers to the possibility to freely access research publications.'²

The truth is, accessing the literature is only half of the story. The other half is the obstacle created by the use of specialised language in the literature. In other words, an inability to understand the meaning of the research represents an even greater hindrance to open science and multidisciplinary collaboration than access to publications. How can this be overcome? By developing value-added content specifically designed to make the original OA research accessible to a wider audience.

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Accessing the literature is only half the story. The other half is the obstacle created by the use of specialised language.



OPEN DOES NOT MEAN UNDERSTOOD

The next step on the path to a more open science requires OA journals to make research articles accessible (and understood) to a wider audience. Simply being open access is not enough. Publishers must change the way they market research articles. This means making the transition from 'journal-led' to 'author-led' marketing.

A transition to author-led marketing moves the spotlight from the journal to the researcher and the research itself. This involves creating content that focuses on the research – the 'inspiring tales of life saving drugs, species on the brink of disaster, and the infinite wonders of the universe' – and the researchers behind these stories, as described in a recent piece on [building trust in science publishing](#).

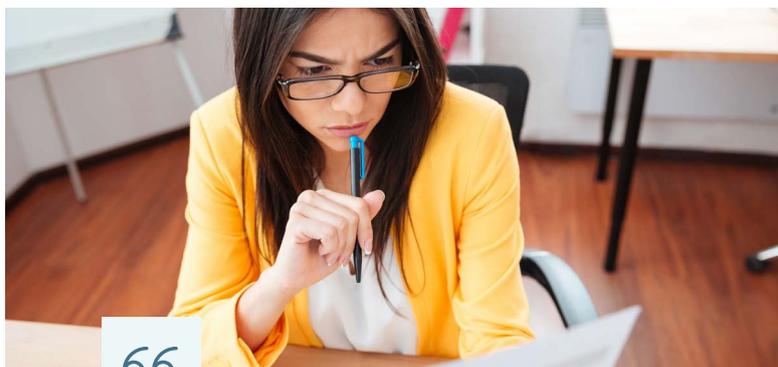
The transition to author-led marketing and by extension, research or article-focused publicity, serves two key OA journal promotion strategies: author services and visibility.

Academics may be relatively new to the idea that marketing tools can be applied to their research. But if a research article is not marketed at all or it is not marketed correctly, then its reach is limited to a small circle of specialists (if even that), whether it is behind a paywall or freely available through OA. A [2019 study by Taylor & Francis](#) concludes that although OA is popular among researchers, OA's 'full potential remains untapped'.

Effective engagement with a wider audience increases impact and opens up opportunities for networking and multidisciplinary collaboration. For that to happen, published research needs to be made visible and understood to scientists in other disciplines and beyond.

How can published research be made more visible and understood? Through digital stories. Author-led and research-led content marketing tools include

plain language summaries, news stories, features, author interviews and profiles, infographics, videos, and podcasts. These types of value-added content work for both OA and traditional publications. The sample provided here is from Elsevier; it shows how a complex published research article is [transformed into a visual story](#) (an infographic) for a wide audience. This digital story can then be shared through the publishers' and journals' homepage and through social media campaigns. The infographic becomes a value-added asset for the publisher, the journal, the researchers and their institutions and the wider audience it reaches.



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Contents lists available at ScienceDirect

Biosensors and Bioelectronics

journal homepage: www.elsevier.com/locate/bios



In-vitro and *in-vivo* measurement of the animal's middle ear acoustical response by partially implantable fiber-optic sensing system



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ARTICLE INFO

Keywords:
Implantable microphone
Fiber-optic sensors
Interferometry
Phase modulation

ABSTRACT

The main obstacle in realization of a totally implantable hearing aid is a lack of reliable implantable microphone. In this paper we have described a potentially miniature fiber optic vibrometer based on a modified Michelson interferometer, designed to serve as a middle-ear microphone for totally implantable cochlear- or middle-ear hearing aids. A model of the sensing system was used for *in vitro* and *in vivo* investigation of acoustical response of sheep's middle-ear ossicles. Surgical and implantation procedure of introducing the sensing optical fiber into



**COMPLEX SCIENTIFIC PUBLISHED
RESEARCH TRANSFORMED INTO
ACCESSIBLE, SHAREABLE INFOGRAPHIC**

Hidden Hearing Aid

New implantable hearing aid with optical fibre microphone solves key problems



WHO estimates 360 million people worldwide have disabling hearing loss



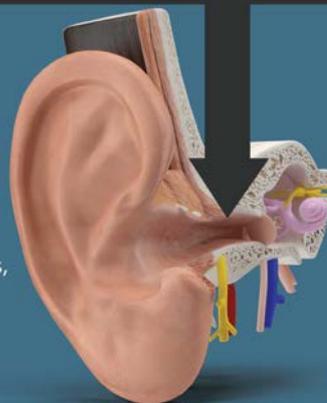
32 million of these are children



Can lead to speech, educational and behavioural issues if not treated



Current hearing aids can cause infections, sound distortion, persistent ringing and other problems



I can hear the wind blow

I can enjoy a rock concert

I can climb a mountain

I can fly in a plane

Djinović, Z., et al., "In-vitro and in-vivo measurement of the animal's middle ear acoustical response by partially implantable fiber-optic sensing system," *Biosensors and Bioelectronics* (2018)

USING DIGITAL STORIES TO GIVE OPEN ACCESS A BOOST

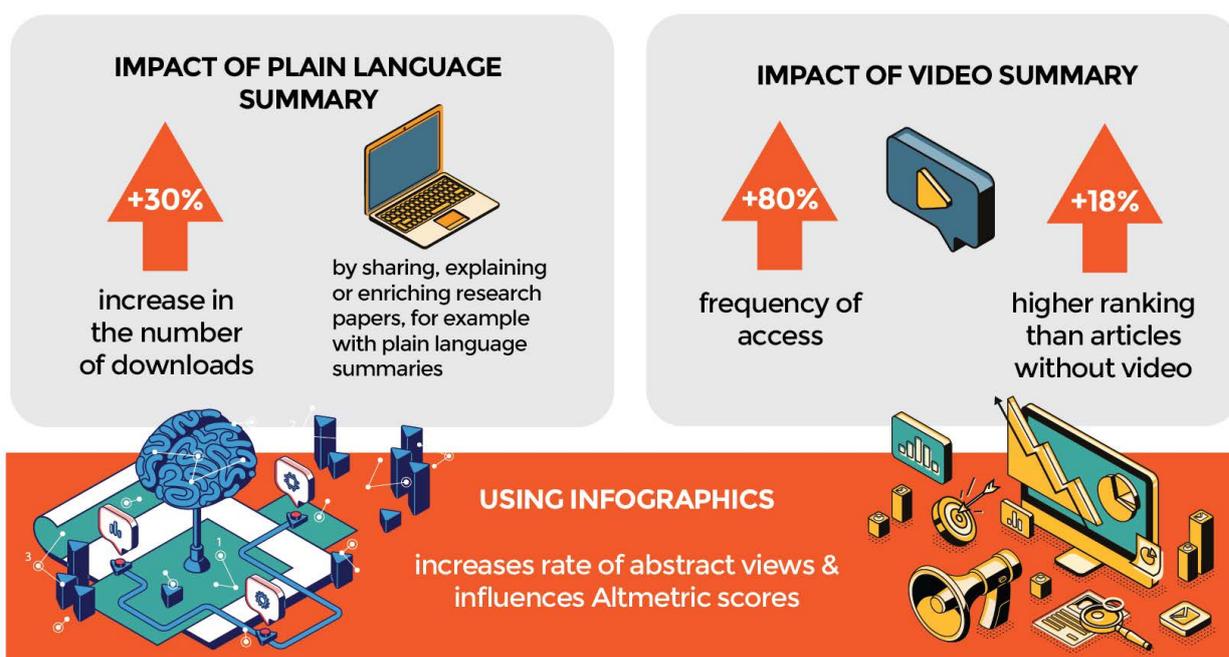
We know from experience that transforming complex scientific papers into clear, concise and compelling digital stories can be challenging, but we also know that it helps increase visibility. Used as part of a publisher's content marketing strategy, these accessible digital stories become value-added assets. They offer a unique value to the reader – an understanding of science – and to the author and publisher – greater research impact and reach.

Along with fellow scientists and students, funders, policymakers, journalists, investors and indeed the general public are also important audiences for a researcher. Research funding agencies and institutions increasingly require that research output is made public as a means of promoting transparency and accountability. Thus, the right content approach can help clarify the significance of research and help to persuade funding panels, inform policymakers or encourage industry collaboration. By indirectly attracting attention to the original research, content

marketing activities also contribute to an increase in both paper downloads and submissions: two of the main challenges faced by library or national consortia and publishers.

Whether they are open access or traditional, promoting an article through actions such as 'sharing, explaining or enriching' may increase article downloads by +23% ([PLOS ONE](#)). SciencePOD's own estimates indicates that promoting an article through a plain language summary that is understandable to a non-specialist audience can increase downloads up to 35%. Articles accompanied by video abstracts rank 33% higher than non-video articles in the same journal and 18% higher than papers published in all journals (Research Square).³ Promotion of articles through infographics appears to increase the rate of abstract views and influence [Altmetric scores](#), suggesting that this form of value-added content (infographics) also has a role to play in increasing awareness of published research.⁴

THE IMPACT OF VALUE-ADDED CONTENT



OA IMPACT REQUIRES MAKING SENSE OF RESEARCH IN AN ACCESSIBLE LANGUAGE

As we move forward with the adoption of OA, academic and research institutions need to start asking themselves who is responsible for the marketing and promotion of research papers their scientists publish. This could not be more important, given the new library and national consortium-level [Article Processing Charge](#) (APC) deals. Ensuring that enough scientists avail of these pre-ordered OA publications is a challenge for publishers and their customers. Therefore, publishers and consortia alike need an effective content marketing approach to fully benefit from any deals they broker.

To guarantee success, an effective content marketing approach requires content that makes sense of research in accessible language. This is now a must. But this kind of value-added content requires specific skills, which many scientists don't have. In the past — and present — publishers have repeatedly tried to demand that their authors produce plain language summaries of their papers. Some publishers even put their skilled editors to the task of then attempting to polish these scientist-produced summaries. The result is

often a jargon-filled, 'longer' abstract intelligible to neither experts nor a wider audience. Such demands should not be made of scientists; scientists should continue to do what they do best: scientific research.

Likewise, it makes sense to leave such value-added content to the professionals that do that best – science writers and other content creators. Expert science writers not only understand the science behind the research, but they are also skilled at interviewing researchers, drawing out the significance of key findings and methods, and translating this into compelling science stories. Accuracy is paramount; therefore, it is essential that these stories are also checked by science editors, familiar with the style that is required to reach wider target audiences.



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It makes sense to leave such value-added content to the professionals that do that best – science writers and other content creators.

CASE STUDY: TRANSFORMING COMPLEX PHYSICS RESEARCH INTO DIGITAL STORIES FOR EPJ

Two non-OA examples from European Physics Journals (EPJ) illustrate how using value-added content could also be applied to OA journals. In both of these examples, content creators produced highlights based on research papers published in EPJ B and EPJ ST. It is important to note that the content creators involved in this project have dual expertise in physics and content creation. This allowed them to transform complex research material into accessible, easy-to-understand stories that appeal to a wide audience – without compromising scientific accuracy.

The highlights were published on EPJ's website and distributed to the media. The bitcoin network highlight (example 2) was picked up by several writers and interested parties and amplified through various websites and channels, bringing further attention to the author, the research and the journal. The EPJ ST highlight (example 1) represents what might be considered an 'ideal' content marketing scenario. Here, value-added content, in the form of a highlight summarising research key findings in compelling and accessible language, garnered the attention of the *New York Times*.



31/07/2018 by SCIENCEPOD EDITOR

Champagne Owes Its Taste To The Finely Tuned Quality Of Its Bubbles

CASE STUDY RESOURCES

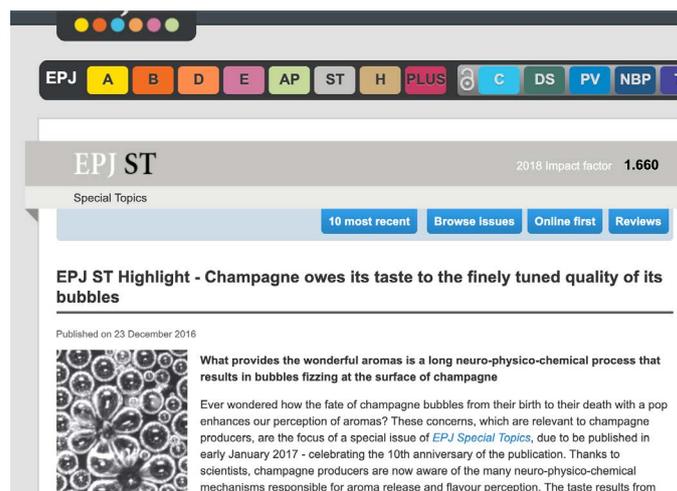
- ARTICLE ON STUDIES
- ARTICLES ABOUT RESEARCH STUDIES
- CASE REPORT PUBLICATIONS
- CASE STUDY STRATEGY
- CHAMPAGNE
- COMMUNICATION
- RESEARCH
- EPJ SPECIAL TOPICS
- EUROPEAN PHYSICAL JOURNALS
- INFOGRAPHIC
- PUBLISHING STUDIES
- RESOURCES ARTICLES AND STUDIES
- RESPONSIBLE RESEARCH INNOVATION

Based on this summary, this story was picked up by the *New York Times* as *A Universe of Bubbles in Every Champagne Bottle*.

What provides the wonderful aromas is a long neuro-physico-chemical process that results in bubbles fizzing at the surface of champagne

Ever wondered how the fate of champagne bubbles from their birth to their death with a pop enhances our perception of aromas? These concerns, which are relevant to champagne producers, are the focus of a special issue of *EPJ Special Topics*, due to be published in early

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The screenshot shows the EPJ ST website interface. At the top, there is a navigation bar with logos for EPJ A, B, D, E, AP, ST, H, PLUS, C, DS, PV, NBP, and T. Below this, the EPJ ST logo is displayed with the 2018 Impact factor of 1.660. A 'Special Topics' section is visible, with buttons for '10 most recent', 'Browse Issues', 'Online first', and 'Reviews'. The main content area features a highlight article titled 'EPJ ST Highlight - Champagne owes its taste to the finely tuned quality of its bubbles', published on 23 December 2016. The article includes a small image of champagne bubbles and a short summary of the research.

Source: EPJ, part of Springer Nature. See also the New York Times, A Universe of Bubbles in Every Champagne Bottle and EPJ ST at <https://epjst.epj.org/epjst-news/-/1166epjst-highlight-champagne-owes-its-taste-to-the-finely-tuned-quality-of-its-bubbles>

EPJ B Highlight - Is the Bitcoin network an oligarchy?

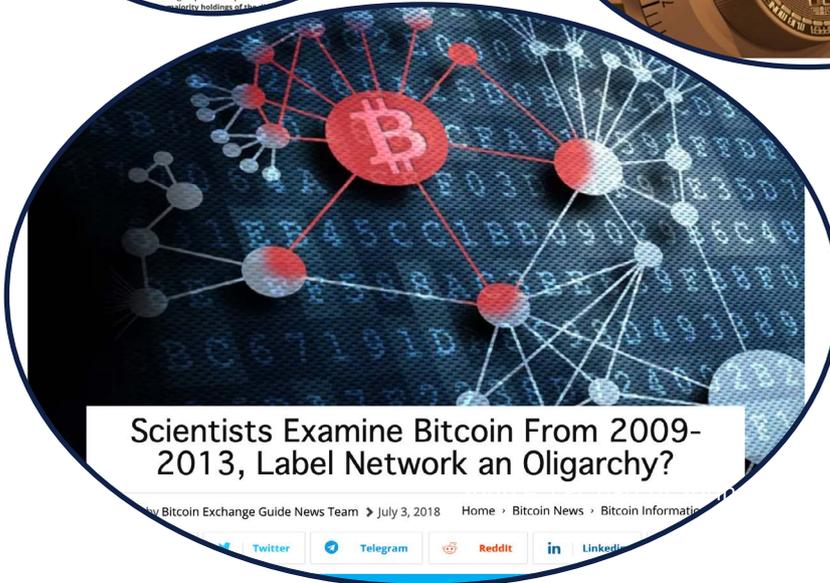
Published online 26 June 2018

New study of Bitcoin transactions reveals hidden owner communities and a high-concentration of wealth distributed between a few people

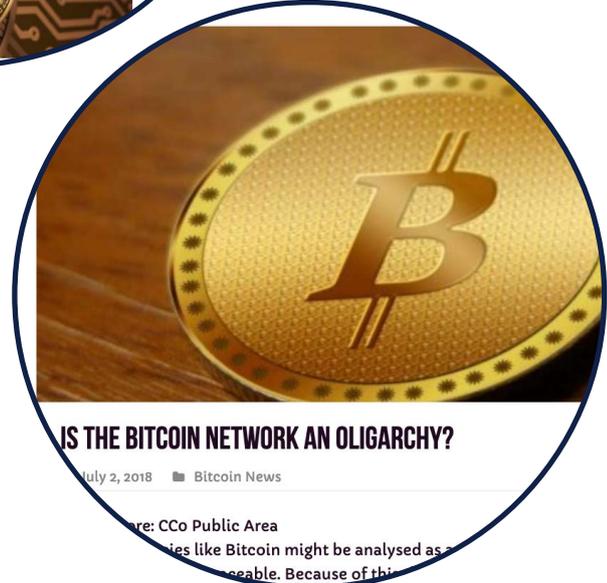


Research: Bitcoin "Run" by an Influential Group Holding Large Amounts of Cryptocurrency

Cryptocurrencies like Bitcoin can be used to hide wealth because every transaction is traceable. This study reveals that they are an oligarchy. A study published in EPJ H by Leonardo Ermann, Controla o Bitcoin Energy in Buenos Aires, Argentina, and co-authors have examined the structure of the Bitcoin network. The results show that Bitcoin owners are highly interconnected.



Scientists Examine Bitcoin From 2009-2013, Label Network an Oligarchy?



Source: EPJ, Part of Springer Nature

"I would like to thank you for the highlight on our paper about bitcoin network entitled, "Is the Bitcoin network an oligarchy?" It generated discussions in multiple websites in multiple countries."

— Dima Shepelyansky, Paul Sabatier University, Toulouse, France

CASE STUDY: DIGITAL STORIES INCREASE REACH FOR ELSEVIER PUBLICATIONS

Articles published in Elsevier Material Science and Computer Science journals were promoted through 500-word 'news story' style content in language accessible to a wide audience. The news stories included new quotes from the research paper authors to enliven the content further. They were created by a [team of content creators with subject matter expertise](#). The result was value-added content offering opportunity for multiple use: author services; content for journal homepage; content for a web landing page for a collection of journals; original material for successful social media campaigns.



CLEANING THE PIPES

News story for Elsevier Computer Science had a **15.51% CTR Rate** and **75,106 link clicks** in the first two weeks

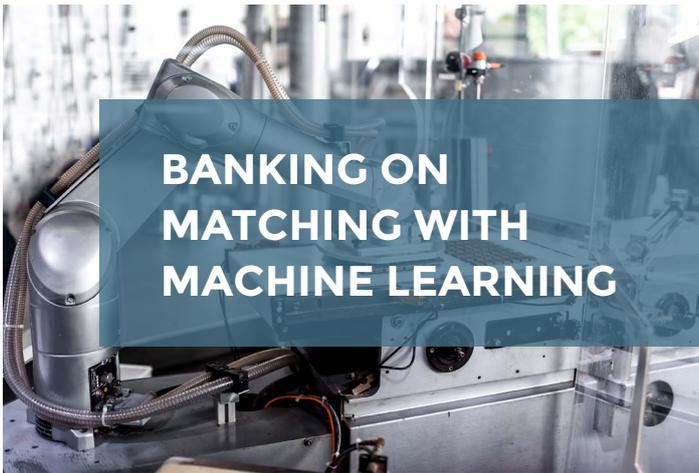
<https://www.materialstoday.com/amorphous/news/cleaning-the-pipes/>



A ROBOT THAT PAINTS

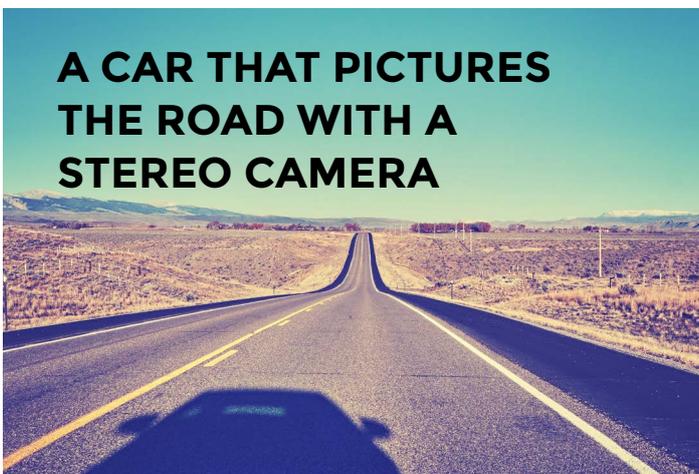
Generated more than **12,000 website visits** from Twitter PPC campaign

<https://www.journals.elsevier.com/robotics-and-autonomous-systems/news/a-robot-that-paints>



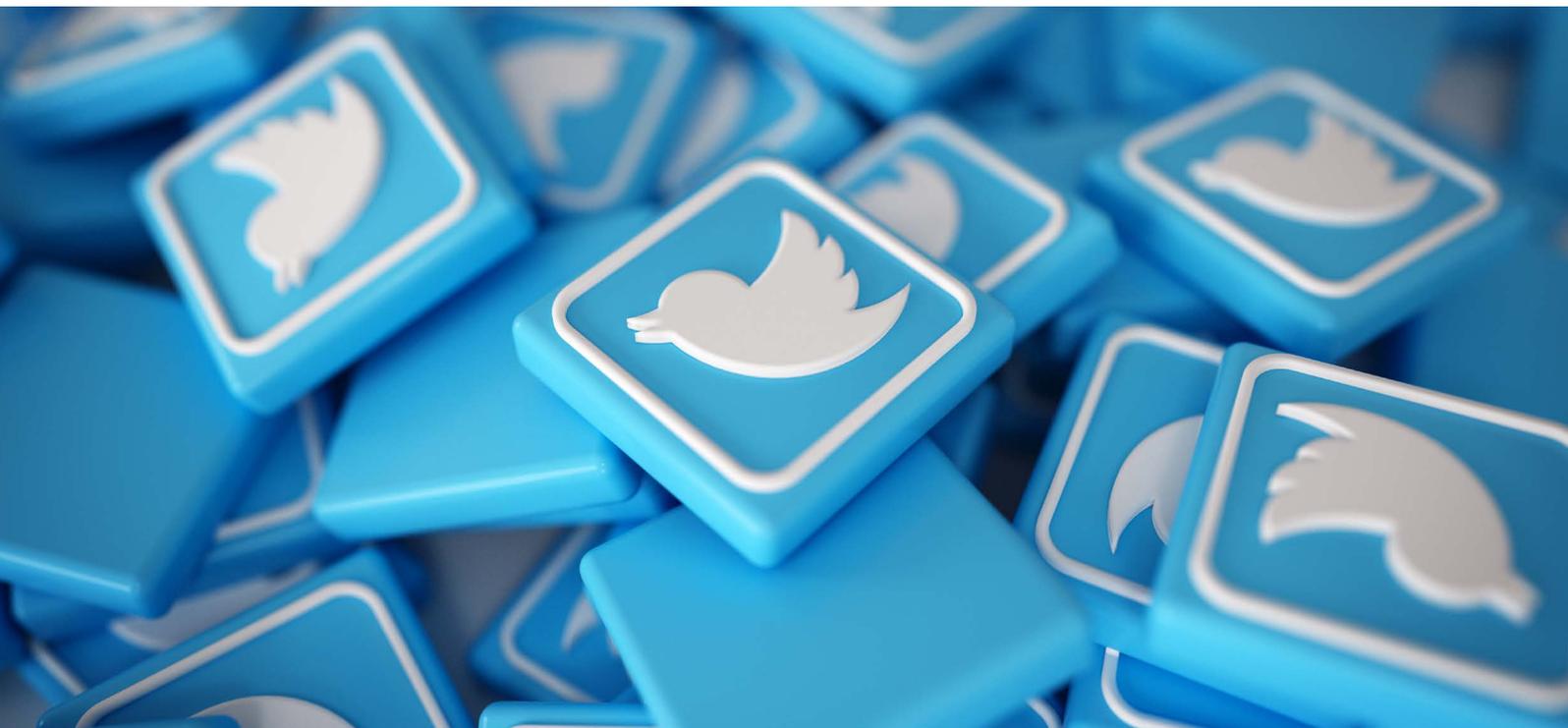
Generated more than **7,000 website visits** from Twitter PPC campaign

<https://www.journals.elsevier.com/information-sciences/news/banking-on-matching-with-machine-learning>



Generated more than **13,000 website visits** from Twitter PPC campaign

<https://www.journals.elsevier.com/robotics-and-autonomous-systems/news/driving-eyes-the-future-of-autonomous-vehicles/>

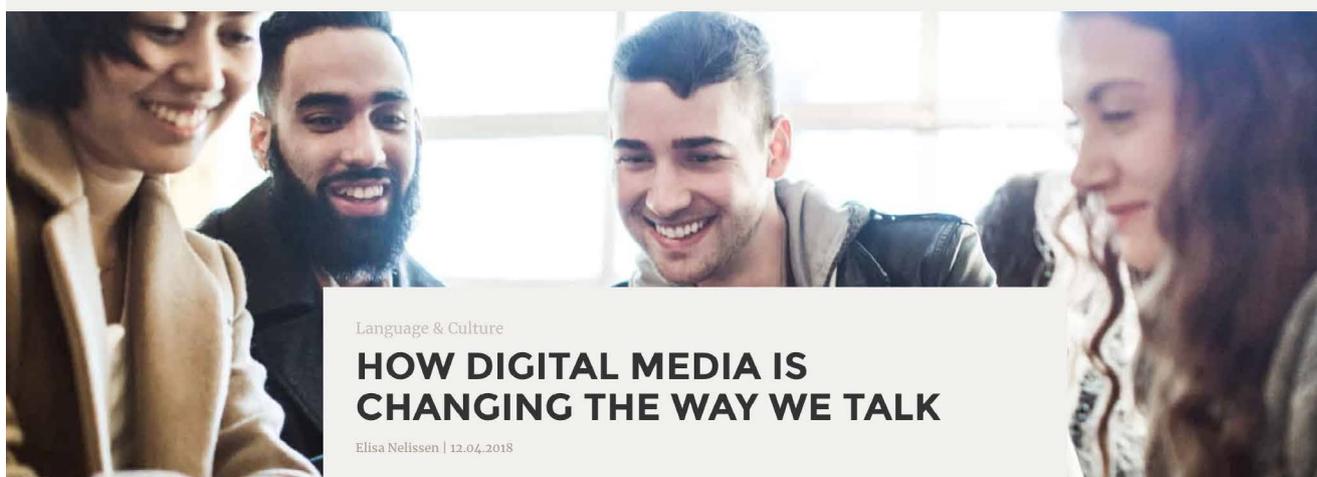


CASE STUDY: MARKETING OA BOOKS AND CHAPTERS

The OA science publishing landscape stretches beyond articles in scholarly journals. Books, monographs and book chapters are also part of the transition to open access. As with published articles, there is more demand for OA books and many research funders are mandating that books and book chapters are available in OA.⁵

The OA landscape and the broader changes in the publishing market demand new marketing methods: Simply putting an OA book on a platform and hoping people will find it is not a viable marketing strategy. OA content must be discoverable. Publishers must find ways to market OA books to broad communities of authors and readers.⁶ This means a greater emphasis on social media marketing as well as growing emphasis on digital stories that appeal to wider audiences yet maintain the accuracy of the scientific research that informs them.

Marketing efforts by publishers such as De Gruyter are transferrable and applicable to OA publications. De Gruyter publishes value-added content in the form of digital stories in web-based 'magazines' to promote the content of its publications – academic journal articles as well as books. These digital stories are aimed at a wide audience and are designed to increase visibility and discoverability of publications. Topics range from [realistic robotic handshakes](#) to the [role of machine learning in illegal logging](#), [monitoring biological sea contaminants](#), and [how digital media changes the way we talk](#).



Language & Culture

HOW DIGITAL MEDIA IS CHANGING THE WAY WE TALK

Elisa Nelissen | 12.04.2018

A new linguistic study analyzes how technology transforms our communication. The current change is unique in its speed –and may have far-reaching cultural and educational consequences in the long run.

CASE STUDY: THE CASE FOR INTERVIEWS

A transition to author-led marketing moves the spotlight from the journal to the researcher and the research itself. Digital stories, such as interviews and profiles, which focus on authors and their work present opportunities to engage authors and to reach wider audiences.

Is it worth it? Authors think so. The 2016 OAPEN-UK study found that authors place as much value on marketing and distribution services as they do on peer review coordination.⁷ Moreover, this type of value-added content (interviews) is particularly adaptable to different formats and distribution channels – text, audio and video – diversifying avenues for discoverability.

Making OA publications visible and discoverable through different value-added content formats:

TEXT



http://www.youris.com/environment/interviews/profile_stephen_stansfeld_has_been_studying_the_effect_of_noise_pollution_on_peoples_health_and_their_remedy.kl (Credit Innovation Seeds/Youris.com)



AUDIO



<https://www.euroscientist.com/we-humans-fantastic-karaoke-singers/> (Credit EuroScientist)



VIDEO



<https://blog.frontiersin.org/12/02/2016/scientist-at-red-sea-research-center-looks-at-the-role-of-bacteria-in3-d-coral-reefs-ecosystems/> (Credit Frontiers)



OA-STYLE FUNDING FOR CONTENT MARKETING

Marketing remains a vital stage in the publishing process, but it requires resources – time, capital and skill.⁸ There are many ways in which marketing value-added content can be funded. The most obvious source may be the marketing budgets of publishers or societies. But, the library and national consortia in charge of negotiating transformational deals with publishers should also be more proactive in including such services in the deal. They could allocate a fraction of the total OA deal budget to content marketing.

Publishers working with consortia have an interest in ensuring that scientists included in the deal actually use the APC provided as part of their deal. Typically, the APC is calculated based on previous publication levels. To ensure that publication volumes remain the same, publishers and research institutes must adopt effective content marketing approaches that

support the uptake of pre-ordered APCs. Value-added content promoted through multiple channels, social media and email campaigns yields results.

For scientists whose papers are not included in consortia or publisher marketing efforts, we envision the possibility of authors themselves selecting which of their research papers merit being professionally turned into accessible digital stories – in the form of a proper plain language summary, a news-style article, an infographic, or a Q&A interview, for example. This approach requires OA publishers to include the option of adding a marketing fee to the APC. Ultimately, this does not fundamentally change the way resources are spent vis-a-vis publication, but rather represents a shift in who bears the costs of such marketing efforts.



ABOUT SCIENCEPOD

The first platform for science content marketing – clear, concise, compelling content.

SciencePOD stands for Science Prose On-Demand. We take complex ideas and turn them into effective and engaging digital stories for use in marketing, science communication and media. The SciencePOD platform is an innovative one-stop-solution for quality science content – giving you access to a global network of science and technology content creators and making it easy to order content through intuitive editorial and workflow tools.

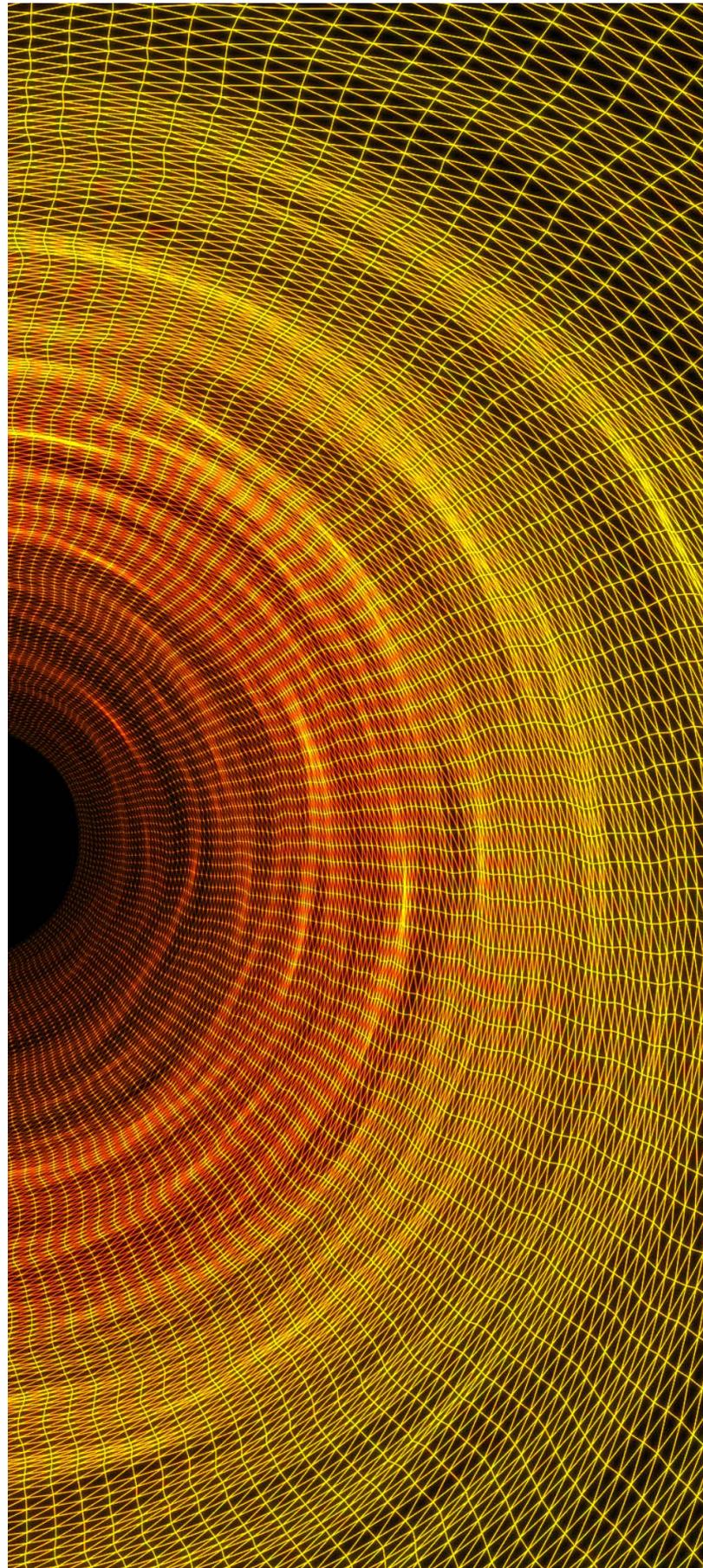
Contact SciencePOD: editor@sciencepod.net.

For more information, visit the SciencePOD website: <https://sciencepod.net>

Register on the SciencePOD platform:

<https://app.sciencepod.net/register/client/>

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REFERENCES

¹ Sections of this white paper are drawn from an article by Sabine Louët, SciencePOD founder and CEO, and are reproduced with kind permission from [Research Information](#) (published on 25 November 2019).

² European Commission, Trends for open access to publications: https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science/open-science-monitor/trends-open-access-publications_en. For definitions of OA and discussion of types of OA see Piwowar et al., The state of OA: a large-scale analysis of the prevalence and impact of Open Access articles, Peer J. (2018): <https://peerj.com/articles/4375/>

³ From Erdt M et al. (2019), Analysing researchers' outreach efforts and the association with publication metrics: A case study of Kudos, PLOS One 8(12): e0183217 <https://doi.org/10.1371/journal.pone.0183217>; SciencePOD data on plain language summary use; Research Square (for video): <https://www.researchsquare.com/videos/rs>.

⁴ On infographics see Huang S et al. (2018), The effect of an infographic promotion on research dissemination and readership: A randomized controlled trial, CJEM 20(6): <https://www.ncbi.nlm.nih.gov/pubmed/30289098>; Thoma B et al. (2018), The impact of social media promotion with infographics and podcasts on research dissemination and readership, CJEM 20(2): <https://www.ncbi.nlm.nih.gov/pubmed/28899440/>; The effect on article full-text views was less pronounced.

⁵ Knowledge Exchange, A landscape study on open access and monographs: Policies, funding and publishing in eight European Countries (October 2017): http://repository.jisc.ac.uk/6693/1/Landscape_study_on_OA_and_Monographs_Oct_2017_KE.pdf

⁶ Knowledge Exchange (October 2017).

⁷ Collins E, Milloy C (2016). OAPEN-UK Final Report: A five-year study into open access monograph publishing in the humanities and social sciences. Cited in Knowledge Exchange (October 2017).

⁸ Knowledge Exchange (October 2017).