EUA BRIEFING PAPERS

Open Access to Research Publications: Looking Ahead.

An overview of policy developments and positions from a European university perspective.

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Contents

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INTRODUCTION

The publication of research outcomes in digital formats is providing scientists and other stakeholders in research and innovation with enhanced opportunities to increase the visibility of, and widen access to, scientific articles. This facilitates developments towards Open Access (OA) to research publications, a phenomenon which has received increased attention from the academic community, publishers, research funders, governments and even the general public over the past years. In the context of the European Union (EU), as part of a larger range of policies to foster the circulation of knowledge, the European Commission (EC) made OA one of the main priorities for the European Research Area (ERA) (COM(2012) 392),[1] adopting it as a principle. Recently, the EC extended and reinforced its OA policy by requiring each beneficiary of the current EU Framework Programme for Research and Innovation, Horizon 2020 (H2020), to ensure OA to all peer-reviewed scientific publications resulting from the funded research.[2] OA in general refers to access to both scientific publications and research data. However, these two areas require different treatment and are at different stages of development, with OA to research publications presently much further developed than OA to research data. This briefing concentrates on OA to research publications.

The European University Association (EUA) has followed the developments in OA policies in the university sector since 2007, when a working group was created to provide an initial set of recommendations to EUA membership.[3] More recently, in the framework of the EC's Digital Agenda for Europe,[4] and the signature of a Memorandum of Understanding (MoU) between the European Commission and European University Association in 2012,[5] EUA committed to encourage universities to implement OA policies at institutional level. As active research institutions, universities are directly affected by practices and policies in OA to research publications. OA policy is a complex issue and its take-up by EUA at European level on behalf of its diverse membership, with nearly 800 universities and over 30 National Rectors Conferences (NRCs), is thus far from straight-forward.

In this context, EUA is carrying out a multifaceted set of actions aimed at gathering facts, policy positions and relevant information in the field, as well as pooling expertise to assist universities in the OA dialogue at European level. With its member NRCs, EUA has continued dialogue through the EUA Council and specifically with the EUA Research Policy Working Group (RPWG). A dedicated "task force" including three NRCs (see section 3.1) was set up with an advisory role to the RPWG and EUA Council. At institutional level, EUA is currently conducting a survey amongst its membership to collect information on the existence and nature of institutional policies promoting OA to research publications and on their level of implementation. The outcomes of this survey will be available by the end of 2014.

The present briefing report is another EUA initiative in this field, aiming at providing its membership with an informative policy overview. Its overall purpose is to contribute to the further policy discussion at European level by raising awareness of this important topic for research and for research dissemination. Clearly, there is a wealth of information on OA to research publications in books, articles and on the internet, and it was not the objective of this briefing to write a comprehensive review of OA literature at this point. This briefing presents a selection of policy documents and positions on OA to research publications by national and international

organisations representing universities, research institutes, scientists and research funders. It also presents information on the EC's policy developments and reports on OA. At the end, the document outlines succinctly the key issues on OA to research publications which, in the view of EUA, are a basis for further reflection and for stimulating dialogue among the academic community, research funders and publishers.

1. OPEN ACCESS MAIN DEFINITIONS

OA aims at enabling the widest possible circulation of scientific information. The Budapest OA Initiative (February 2002, 2012), the Bethesda Statement on OA (June 2003), and the Berlin Declaration (October 2003)[6] are the most central and influential references in the OA movement.[7]

In brief, OA to research publications refers to free availability on the internet to research publications, permitting any user to read, download, copy, distribute, print, and search content. The authors' control over the integrity of their work and their right to be acknowledged and cited is, in essence, the only constraint on reproduction and distribution of the scientific work (Budapest, 2002, 2012).[1]

According to the Berlin Declaration (2003), the internet offers new possibilities for the distribution of scientific knowledge through the OA paradigm. OA contributions can be varied, but must satisfy two conditions (Berlin, 2003):[1]

- "The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship […], as well as the right to make small numbers of printed copies for their personal use."
- "A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in an appropriate standard electronic format is deposited (and thus published) in at least one online repository using suitable technical standards (such as the Open Archive definitions) that is supported and maintained by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable Open Access, unrestricted distribution, inter operability, and long-term archiving."

There are two main ways of implementing OA. They are the well-known routes towards OA: "green" and "gold". [8,9]

- Green OA, or self-archiving, means that the published article or the final peer-reviewed manuscript is made freely available in an online repository before, after or alongside the publication process. The author has the right to deposit the article in an online repository, but many publishers require a period of embargo before the paper can be made openly accessible.[i] The delay period is called the "embargo period". Access to the

[i] On the topic of archiving policies of scientific journals it is worth mentioning the "Sherpa/RoMEO" example (www.sherpa.ac.uk/romeo/index.php?la=en&fIDnum=|&mode=simple). RoMEO is a searchable database of publisher's policies regarding the self-archiving of journal articles on the web and in OA repositories; RoMEO is administered by SHERPA Services at University of Nottingham, UK.

full text during the embargo period is possible only through subscription or the payment of a pay-per-download/view fee.[3,4]

- In contrast, gold OA, or "author pays" publishing, means that a publication is immediately provided in OA mode by the scientific publisher. Associated Article Processing Charges (APCs)[ii] – i.e., publication fees – are sometimes asked by publishers but, when journals do charge publication fees, these are typically covered by the researcher's institution or research funding agency. "OA journals do not charge readers and grant extensive usage rights in accordance with the authoritative definition of the Budapest OA Initiative."[3] There are two main types of journals for gold OA (i.e., full OA journals and hybrid journals) which will be described later (see section on "Business models for Open Access").[4] According to a study examining the market for OA APCs (Björk & Solomon, 2014), the average APC for publication in full OA journals is between $1 418 (OA journals from "non-subscription" publishers) and $2 097 (OA journals from "subscription" publishers). By contrast, APCs for hybrid OA journals are significantly higher at $2 727 on average.[10]

Importantly, in 2008 Stevan Harnad and Peter Suber proposed the terms "gratis OA" and "libre OA" (initially termed, less neutrally, as weak OA and strong OA) to describe the two components of OA (i.e., "removal of price barriers" and the "removal of permission barriers"). As described by the authors, "the gratis/libre distinction is not synonymous with the green/gold distinction. The green/gold distinction is about publishing venues. The gratis/libre distinction is about user rights or freedoms." Specifically, the two terms describe two kinds of free online access and the fundamental distinction is that gratis OA refers to the removal of price barriers alone, whereas libre OA refers to the removal of price and at least some permission barriers.[iii,6] As noted by Harnad and Suber, the major public statements from Budapest, Bethesda, and Berlin describe OA in the libre OA sense. Notwithstanding, a typical funder or university mandate requires gratis OA, and most OA success stories deliver gratis OA.[11]

2. SELECTED STAKEHOLDERS' POSITIONS ON OPEN ACCESS TO RESEARCH PUBLICATIONS (with relevance for the university sector)

This section focuses on the main existing positions on OA by EUA and other organisations representing European research organisations' networks and research funding bodies. The main points from these policy positions with relevance to universities are summarised below.

[ii] APCs, or publication fees, are typically covered by the authors' institutions or research funding bodies. Payment of APCs allows all users free, unlimited and immediate access to the published article. As noted by SpringerOpen, "this flat charge, which varies from journal to journal, covers the entire cost of the publication process. This includes peer-reviewing, editing, publishing, maintaining and archiving" (www.springeropen.com/authors/apc).

[iii] "When rights holders grant permission in advance for uses that exceed fair use, then they remove permission barriers. As a practical matter, there are two ways to remove permission barriers: (1) with copyright holder consent, through a license or statement permitting uses that would otherwise be impermissible or doubtful, and (2) with the expiration of copyright and the transition of the work into the public domain." (Harnad & Peter Suber, 2008)

3.1. Recommendations from the European University Association's Working Group on Open Access (EUA, 2008)[3]

Recommendations for university leadership: develop institutional policies and strategies that foster the availability of research results; create an institutional repository; require researchers to self-archive their research publications; include copyrights in institutional intellectual property rights (IPR) management; explore the availability of resources to support the emerging "author pays" model.

NRCs should work with national research funding agencies and governments in their countries to implement the requirement for self-archiving of research publications in institutional and other repositories (EUA, 2008)

Recommendations for National Rectors' Conferences (NRCs): work with national research funding agencies and governments in their respective countries to implement the requirement for self-archiving of research publications in OA repositories; prioritise raising awareness of university leadership to the importance and advantages of OA policies.

Recommendations for EUA: continue to contribute actively to the policy dialogue on OA with a view to a self-archiving mandate for all research results arising from EU funding; continue to collect expertise from Europe's universities on OA to provide input to European and international events advancing OA to research publications, research data and the preservation of these research outputs.

Since 2012, in the framework of the MoU signed with the EC, EUA set up a task force with three experts representing three NRCs (National Rectors' Conferences of France (CPU), the Netherlands (VSNU) and the Rectors' Conference of the French Community of Belgium (CRef)) to follow up on the developments in OA and assist EUA in the dialogue on OA at European level.

3.2. National Rectors' Conferences positions on Open Access (available in English or French on the NRCs' websites)

Several of EUA's collective members have published their positions and/or activities in the field of OA on their websites; the following are the results of a search of their websites for OA positions. Note that several NRCs have published OA positions in their national languages, but for this overview we concentrated on information available in English or French. Despite the variety of OA-related topics and positions conveyed by each NRC, several of them focused on topics such as OA routes and repositories.

At the time of data collection (March to May 2014), eight NRCs had made available on their websites information on their activities and positions regarding OA in English and/or French. The list of activities/positions for each NRC can be found below.

- **Conference of Italian University Rectors (CRUI), Italy:** Group on OA 2006-2013.[12]
- **Conference of University Presidents (CPU), France:** "On 2 April 2013, the National Centre for Scientific Research (CNRS), the Agency for Mutualisation of Universities and Higher Education Institutions (AMUE), the Conference of University Presidents (CPU), the Association of *Grandes écoles* (CGE) and 22 establishments decided to use Hyperarticles online (HAL) as a common platform for submitting their scientific production." HAL was created by

CNRS in 2000 as a platform for submitting or building up institutional or theme-based archives using the Green model.[13]

- **German Rectors' Conference/Hochschulrektorenkonferenz (HRK):** (a) Priority Initiative "Digital Information" by the Alliance of Science Organisations in Germany (11 June 2008);[14] (b) OA and Copyright: No encroachment on the freedom of publication (25 March 2009);[15] (c) Position Paper on the Structure of the 8th EU Research Framework Programme (2014-2020) (6 January 2011);[16] (d) Opinion on the Green Paper "Towards a Common Strategic Framework for EU Research and Innovation Funding" (3 May 2011);[17] (e) Higher education institutions in a digital age: rethinking information competency – redirecting processes (20 November 2012).[18]
- **Irish Universities' Association (IUA):** (a) Government launches National OA Statement (23 October 2012);[19] (b) "OA to Irish University Research" (12 September 2012).[20]
- **Norwegian Association of Higher Education Institutions (UHR): "**Greater access to Norwegian scientific publications: English summary of UHR's recommendations" (March 2009).[21]
- **Rectors' Conference, French Community of Belgium (CRef):** (a) In 2008 the University of Liège launched an institutional repository, called Liège ORBi (Open Repository and Bibliography), and set out a strong institutional self-archiving policy.[22,23,24] This model has been adopted by CRef and the Flemish Interuniversity Council (VLIR); (b) "OA in the French Community of Belgium: a study conducted by the Interuniversity Library of the French Community in Belgium (BICfB) at the request of the university rectors of the Fund for Scientific Research (FNRS)" (May 2012).[25]
- **The University of Luxembourg:** (a) University of Luxembourg announces its intent to actively participate in the OA initiative (May 2012);[26] (b) Official launch of "ORBilu", the University of Luxembourg's Open Repository and Bibliography (22 April 2013).[27]
- **Universities UK (UUK):** (a) "Publishing research results: the challenges of OA" (29 May 2007);[28] (b) "UUK welcomes Dame Janet Finch report on OA" (19 June 2012);[29] (c) UUK submission of written evidence to the Commons Business, Innovation and Skills Committee inquiry on OA (23 April 2013);[30] (d) "UUK response to OA progress report/Finch report implementation & review" (18 November 2013).[31]

3.3. League of European Research Universities (LERU) (LERU, 2011, 2012, 2013)[3,32,33]

According to LERU's initial positions (2011, 2012), beyond establishing an institutional repository or repositories, universities should consider creating a communications and advocacy strategy as a means of informing researchers about the relevance of establishing a repository and on the submission procedure.

Although there is evidence to suggest that gold OA increases readership, there is no decisive evidence to suggest that it also increases citations. Moreover, various full OA journals are young journals and, as such, may not have the same profile or impact factor of their well-known, already established competitors, regardless of their future influence (LERU, 2012)

As mentioned by LERU (2012), although there is evidence to suggest that gold OA increases readership, there is no decisive evidence to suggest that it also increases citations.[iv] Moreover, various full OA journals are young journals and, as such, regardless of their future influence, may not have the same profile or impact factor as their well-known, established competitors.

Although universities could consider setting funds aside for paying OA journals' publication charges, gold OA charges for all their research outputs would be quite substantial. As such, LERU suggested that "at an early stage, LERU universities can embed their OA efforts into pan-university strategies" (LERU, 2012).

In 2013, LERU conducted a survey of its university members' activities in a selection of ERA areas. The survey results on OA revealed that all LERU universities had implemented strategies and mechanisms for OA to some degree. According to LERU, "much of researchers' output is or will be held and available through discipline-based repositories (national and international). […] Obstacles to availability via institutional repositories are or will be the publisher copyright restrictions (including embargo periods) and the additional costs of APCs (on top of the costs for institutional journal subscriptions)" (LERU, 2013).

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3.4. Science Europe (SE) (SE, 2013a,b)[34,35]

SE included OA to research publications as one of nine Priority Action Areas in its Roadmap. According to SE, "it is crucial to move to a system of OA, in order to increase both the impact of publications and the cost efficiency of the publication system" (SE, 2013a).

According to SE, enhanced policies on OA could have several benefits: facilitating cross-border and interdisciplinary collaboration; promoting and accelerating more efficient and cost-effective R&D processes; increasing author visibility and opportunities for knowledge application; and fostering a culture of openness in the public sector (SE, 2013a).

SE member organisations cooperate in several areas relevant for OA, including: incorporating appropriate OA provisions into guidelines for research funding; searching for solutions that support authors in openly sharing their research results; addressing possible impacts of the transition to OA on other aspects of the research process (e.g., data collection and project design, peer-review and evaluation, research careers); and defining incentives for researchers (SE, 2013a).

SE member organisations will cooperate by acting in several areas including: incorporating appropriate OA provisions into guidelines for funding; searching for solutions that support authors in openly sharing their research results; addressing possible impacts of the transition to OA on other aspects of the research process; creating incentives for researchers (SE, 2013)

SE member organisations have agreed on a set of common principles to support the transition to OA based on the following points: SE member organisations (a) "share the view that OA, as defined in the Berlin Declaration, is not only about the right of access, but also about the opportunity to re-use information with as few restrictions as possible, subject to proper attribution" and (b) "co-ordinate efforts to ensure the efficient and cost-effective use of public funds, and combine programmes for covering OA costs with budget control mechanisms and to build up monitoring systems for these costs" (SE, 2013b).

[iv] But note that the recent "Report on Open Access Strategies in the European Research Area (Science-Metrix, 2013)" (see section below) reports on studies suggesting that in general OA increases citations and/or usage of research.

3.5. NordForsk's policy on Open Access (Nordforsk, 2014)[36,37]

In June 2013, the NordForsk Board adopted SE's principles for OA to research publications and further developed NordForsk's OA policy in line with relevant national, Nordic and European initiatives.[29] According to the final report from March 2014 on the progress achieved under the Memorandum of Understanding between the EC and Nordforsk (Nordforsk, 2014),[30] NordForsk's OA policy followed the Swedish Research Council's model, aiming at achieving a balance between green and gold OA. Moreover, the report indicated that 30 Nordic universities were working together to set up a system of interoperable repositories. This system is akin to that of the University of Liège's ORBi model.[38]

A survey conducted by NordForsk in autumn 2013 to monitor progress towards ERA priorities, covering 73 partners at six Nordic Centres of Excellence in Denmark, Finland, Iceland, Norway and Sweden (74% response rate), showed that 38.6% of respondents had adopted principles on OA publishing, while 22.8% were planning to do so during the next 12 months. The Nordic Centres of Excellence that had not yet adopted principles on OA publishing indicated the lack of a common institutional policy, the institution's focus on prestigious journals, and the costs related to implementing OA, as the main reasons for preserving their current publishing policies (Nordforsk, 2014).

3.6. Initiative for Science in Europe (ISE) (ISE, 2014)[39,40]

In 2014, ISE published a paper on learned societies, academic publishing and transitions to OA, which presented input from ISE's 19 European learned societies, federations and other organisations. The document addressed the role of journal publishing for learned societies, as well as the challenges for learned societies' activities and roles in the transition to OA publishing (ISE, 2014).

According to ISE, one of the challenges posed by the transition to OA is the high APCs of some journals (e.g., journals from Cell Press have APCs of up to $5 000), which may act as an obstacle for researchers with limited funding. Additionally, journal income is used by learned societies to fund, either partially or in full, a series of activities, such as fellowships/scholarships, workshops, annual meetings, travel grants, etc. ISE noted that "a disruption to the flow of revenues may mean a need to reduce or eliminate programmes or activities, staffing, or, in the worst case, the entire learned society itself" (ISE, 2014).

ISE Member societies have, however, identified a few alternatives to subscription revenues for learned societies: increasing membership fees, increasing fees for some of the learned society activities (potentially limiting the participation of young researchers as a result), or funding from governmental or non-profit agencies. For the journals, increasing the APCs and licensing more value-added journal content could represent alternative sources of revenue (ISE, 2014).

According to ISE, many discussions about how to make the transition to OA have focused on funders and researchers. Potential mechanisms for supporting the transition include funders' incentives and penalties to recommend or mandate that their grantees make their research freely available through OA. However, ISE suggests that learned societies can also give a significant contribution to policy-setting processes, and ISE's statement "urges both decision makers and representatives from learned societies to be tightly

engaged on this issue and encourage open and wide-ranging conversations about our shared values" (ISE, 2014).

3.7. Global Research Council (GRC) (GRC, 2013)[41]

In May 2013, the GRC endorsed an Action Plan for research councils worldwide to move towards OA to publications. According to the GRC, the major principles and aims of the plan are: "(a) encouragement and support for publishing in OA journals, (b) encouragement and support for author self-deposit into OA repositories, and (c) the creation and inter-connection of repositories" (GRC, 2013). The Action Plan therefore suggested 14 groups of actions by which participants in the GRC could foster and support OA, including raising awareness in the research community, promoting and supporting OA, and assessing the implementation of OA. The GRC noted however that there are regional and individual differences (e.g., adequacy of ICT infrastructure) that should be considered by each region, country or funding agency when developing its Action Plan.

Additionally, according to the GRC "in transitioning OA, efficient mechanisms to shift money from subscription budgets into OA publication funds need to be developed. Such mechanisms require clear cost structures, precisely defined publication services, and transparent pricing models" (GRC, 2013). The GRC stressed also the importance of communication between research funders and other stakeholders for identifying win-win scenarios and mutual benefits.

3. EUROPEAN COMMISSION AND OPEN ACCESS

Since the publication of its OA handbook in 2008, the EC has published several policy documents and reports aimed at establishing an OA policy at European level (a selected list can be found at the end of this report).[42] The EC has also extended and reinforced its OA policy for H2020 as briefly outlined below.[43]

4.1. Horizon 2020[44,45]

Dissemination, transfer and use of research results, including through OA to publications and data from publicly funded research, singled out as one of the key action points to achieve a well-functioning ERA (EC, 2010)

The EC singled out "the dissemination, transfer and use of research results, including through OA to publications and data from publicly funded research", as one of the key action points to be pursued in order to achieve a well-functioning ERA.[38] Consequently, the EC made OA to research publications a general principle of H2020. As of 2014, the following principal rules apply for all articles produced with H2020 funding:[37]

- articles will have to be either immediately made accessible online by the publisher (gold OA), and publication costs can be eligible for reimbursement; or
- researchers will deposit their articles available immediately on acceptance through an OA repository no later than 6 months (12 for socio-economic sciences and the humanities) after publication (green OA).

Furthermore, the Guidelines on OA to Scientific Publications in Horizon 2020 recommend that researchers use the Open Access Infrastructure for

Research in Europe (OpenAIRE)[46] as a tool to assist in the selection of appropriate repositories.[v] OpenAIRE provides support services for the identification, deposit, access and monitoring of EC-funded articles under FP7 and H2020.

4.1.1. European Research Council (ERC)[47,48]

Since its establishment in 2007, the ERC has been a strong supporter of the principle of OA as a fundamental part of its mission. In particular, in December 2007 the ERC Scientific Council issued specific Guidelines for OA, declaring that all peer-reviewed publications from ERC-funded research projects should be made openly accessible shortly after publication. A first revision of the 2007 guidelines was published in June 2012 and ERC grants awarded under a call from the 2012 or 2013 Work Programme typically included a "Special Clause 39 ERC", converting the Guidelines for OA into a formal obligation (OA fees incurred during the course of the project were eligible for reimbursement).

Funding agencies should take several key points for transparency into account. Among these are: coverage of APCs, i.e., publication fees, preference for green or gold OA, metadata, and project scope. (Science-Metrix/EC, 2013)

A new update of the Guidelines for OA was adopted by the ERC Scientific Council in October 2013. These guidelines stated that OA should be provided as soon as possible (with a specified embargo period allowed) and strongly encouraged the use of discipline-specific repositories by ERC-funded researchers.[40] Since 2014, OA to peer-reviewed publications became mandatory for projects funded within the ERC funding schemes under H2020. Also noteworthy is a study conducted by the ERC in 2012, which sampled over 600 journal articles. Results revealed that 62% of journal articles from ERC-funded projects were available in OA, with a larger share in Life Sciences (70%) than in the Social Sciences and Humanities (50%).[41]

4.2. Report on Open Access Strategies in the European Research Area (Science-Metrix, 2013)[49]

Eight of the EU-28 (30%) have reached the "tipping point", that is, 50% of the papers published between 2008 and 2011 were made OA (Science-Metrix/EC, 2013)

This report looked at strategies that aim to foster OA and explored current monitoring and enforcement strategies of OA policies. The study examined OA availability for the countries in the EU-28, the European Free Trade Association (EFTA), the accession countries, the European Research Area (ERA), and also Brazil, Canada, Japan and the United States (US). The main points presented in this report can be summarised as follows:

Governmental Open Access strategies: National policies, programmes and principles related to OA had been instituted by several countries in the ERA. The UK, in particular, had been at the forefront of the development of OA to peer-reviewed publications. Moreover, legislation *directly* addressing OA had been proposed in some countries, such as the US and Brazil.

Funding bodies' policies and mandates: Funding agencies should take several key points for transparency into account. Among these are: coverage of APCs, preference for green or gold OA, metadata,[vi] and project scope.[vii,50]

[v] According to the Guidelines, other relevant services listing available repositories are the Registry of Open Access Repositories (ROAR, http://roar.eprints.org/) and the Directory of Open Access Repositories (OpenDOAR, www.opendoar.org/).

[vi] By definition "data about data", or more specifically "information about the context, content, quality, provenance, and/or accessibility of a set of data"; http://researchdata.wisc.edu/manage-your-data/xml-metadata-tools/.

Research institutions' Open Access strategies: In a survey including 162 head librarians at universities and higher learning institutions conducted by Science-Metrix, 42% of the respondents indicated that an OA policy on peer-reviewed scholarly publications existed at their organisation. Moreover, from these, 22% stated that this policy was not publicly available. Importantly, the report mentioned that more universities were requiring their researchers to deposit scholarly articles and/or other research outputs in an institutional or shared repository, and that some universities had set aside funds to pay for OA publication charges.

Other important topics included in the Science-Metrix report related to the effects of OA strategies, OA business strategies, as well as strengths, weaknesses and barriers to the acceptance of OA. These topics are briefly presented below.

Effects of Open Access strategies

Science-Metrix's examination of OA availability revealed that eight of the EU-28 countries (30%) had reached the "tipping point", that is, over 50% of the papers published between 2008 and 2011 were made OA.[viii,51] Outside the ERA, the US and Brazil had also passed the tipping point. The effects of OA strategies and policies include:

Institutional response: The development and implementation of a repository pose multiple challenges associated with matters such as intellectual property rights, data curation,[ix] long-term preservation, infrastructure development and interoperability. Another challenge faced by universities is the promotion of OA within the academic community. According to Science-Metrix's report, "incentives are essential for reaching researchers who are reticent about OA or are deterred by the trade-off between the costs and benefits".

Effects on, and responses of, publishers of scientific journals: As mentioned in Science-Metrix's report, prices of serials have continually risen faster than inflation, while library budgets have only increased moderately, stagnated or even decreased, a situation referred to as "serials crisis". Additionally, the concentration of journals in the hands of a few large publishers is posing additional problems for librarians, as it limits their capacity to opt out of "big deals" or negotiate the contract terms. According to the report, the fact that OA can increase dissemination, maximise market reach, increase visibility

Development and implementation of a repository pose multiple challenges, associated with matters such as intellectual property rights, data curation (e.g., management of data to enable later retrieval and reuse), long-term preservation, infrastructure development and interoperability (Science-Metrix/EC, 2013)

"To date, the most significant challenge facing OA journals around the world has been adopting a funding model that is consistent with their survival" (Science-Metrix/EC, 2013)

[vii] Harnad (2013b) has argued that globally mandated green OA self-archiving in repositories is the means for bringing the cost of peer-reviewed journal publishing down to a fair, affordable, sustainable price. A global network of Green OA repositories would allow publishers to phase out products and services linked with access-provision and archiving.

[viii] Science-Metrix used the proportion of papers published between 2008 and 2011 available for free in April 2013 as a measure of OA availability. Note, however, that this does not measure OA as such, since it also includes delayed access (DA) papers. Namely, DA refers to articles published in subscription journals being made openly available online at the expiry of the publisher's set embargo period (typically 6 or 12 months); this is different from green OA, permitting authors to immediately deposit their peer-reviewed manuscripts in OA repositories (Harnad, 2013a). In short, it is inaccurate to assume, based on the measure of OA availability used, that, for example, over 50% of the papers in a given country were made OA. This ignores the availability of articles due to DA and, in particular, the fact that OA after an embargo of 12 months or more is not OA, but DA.

[ix] "Digital curation involves maintaining, preserving and adding value to digital research data throughout its lifecycle. The active management of research data reduces threats to their long-term research value and mitigates the risk of digital obsolescence. [...] As well as reducing duplication of effort, curation enhances the long-term value of existing data by making it available for further high quality research"; www.dcc.ac.uk/digital-curation/what-digital-curation.

and boost impact factor has been acknowledged by several publishers already. However, "to date, the most significant challenge facing OA journals has been adopting a funding model that is consistent with their survival".

Business models for Open Access

There are a number of business models for OA publishing, depending on the type of access to content, the retention of author's rights and the publication fees. The main business models are:

OA journals which are free for authors and readers. Initially, they may be funded by partners, donations or non-commercial sponsors.

OA journals which are free for authors and readers of the online version, with subscription payment for the paper version. These are mostly well-established print journals, which can count on stable income from subscriptions. This is the normal model used by not-for-profit publishers.

"Author pays" OA journals. OA journals that involve payment of APCs or publication fees have become more popular recently (49% of all OA articles in 2011). Publication fees vary greatly by journal. An example of an "author pays" OA journal is the high-impact-factor *PLOS ONE*, which has achieved financial stability due to its high-volume publishing. *PLOS* journals have attracted a big audience and author base in many fields of knowledge, which drove their impact factor up.

"PLoS ONE, an international, peer-reviewed, high impact factor, OA publication that has achieved financial stability through high-volume publishing. PLoS journals have garnered a large audience and author base, driving their impact factor up" (Science-Metrix/EC, 2013)

Hybrid systems/"open choice" publishing. This system gives authors the option to pay a fee in order to make their articles OA. It is a model often used by traditional, subscription journals. However, there has been limited interest in this model. Science-Metrix reported that only about 2% of authors chose this OA option, according to a study from 2011, possibly as a result of the relatively high fees requested: "Hybrid OA has been criticised by funders and research institutions as an unsustainable fee structure where publishers charge authors for publication while maintaining high subscription prices, a practice linked to "double dipping" (SE, 2013b). "Double dipping" refers to the situation where there is no reduction of the subscription price, but where additional revenue is made from OA charges.[x]

"Hybrid OA has been criticised by funders as an unsustainable fee structure where publishers charge authors for publication while maintaining high subscription prices, a practice likened to "double dipping"" (SE, 2013)

Journals with free access to certain content. These journals give free access to part of a publication (e.g., abstract or references). Many traditional subscription journals offer this service nowadays.

Journals with free access to content after a period of embargo/"delayed OA". Whereas immediate access is given to paying subscribers, free access for any user is permitted only after an "embargo" period (typically a maximum of 6 months for articles in science, technology and medicine, and a maximum of 12 months for articles in social sciences

[x] Note that institutional gold OA payments do not lead necessarily to a concomitant reduction of the subscription prices. In a recent study, Björk and Solomon (2014) outlined three combined (full OA and hybrid) scenarios believed to be the most beneficial for APC-funding policies: (a) APCs are refunded at list prices, with mechanisms put in place on the local level for hybrid OA in order to ensure savings on subscriptions and avoid "double dipping"; (b) APCs are funded according to value-based price caps set for each journal and based on the journal's relative "value"; and (c) the funders cover a fixed percentage of the APCs' costs up to a certain maximum and the remaining portion is covered by universities/authors through other sources.

and humanities).[xi] This business model represents a compromise between free OA and access through subscription or article purchase.

Strengths of Open Access

The main strengths of existing OA strategies identified in Science-Metrix's report included the following aspects:

OA can decrease citation bias (whereby authors only cite easily accessible articles), **and decrease "hollow citations"** (i.e., authors citing articles that they have not actually read).

OA may enable better peer-review, as researchers can "easily see and judge the work of their peers and can access data for re-analysis".

OA can foster multi- or interdisciplinary, inter-institutional and inter-sectoral research and collaboration by boosting the visibility of research outcomes to new and/or wider audiences.

Weaknesses and barriers to acceptance of Open Access

A summary of the weaknesses of existing OA strategies identified in Science-Metrix's report can be found below.

Lack of awareness on OA. Data from a series of surveys has shown that misinformation and misconceptions about OA and lack of awareness of the potential of OA were common among researchers, and this has a negative impact on the rates of deposits in OA repositories and submissions to OA journals.

Concerns about quality and prestige of OA journals. Several quality assurance models (e.g., peer-review, collaborative peer-review, moderation, automatic assessment, and assessment by readers) are used by OA journals. However, "the stigma of low quality among OA journals remains. Surveys of researchers indicate that OA publications are seen by many as not carrying sufficient renown."

Concerns about copyright. Researchers may be reluctant to take the green OA route due to the terms and conditions set in copyright contracts with publishers; "it is often assumed among authors that making their work OA infringes copyright, and the fear of resulting legal consequences has been identified as a crucial barrier to self-deposit in repositories (European Commission, 2011b; Pappalardo, 2008)."

Dissuasive influence of author-side fees, even though these are frequently covered by institutions or research grants**.**

Entrenched current system. As mentioned in Science-Metrix's report, OA journals comprise only around 10% of all peer-reviewed articles in the ERA, Brazil, Canada, Japan and US, possibly also due to the fact that many new OA journals have not had the chance to create a brand image.

Perceived lack of profitability of OA business models and a lack of infrastructure to support OA in developing countries.

The main bottlenecks that have prevented OA from gaining greater acceptance include: concerns about the quality and prestige of OA journals (OA publications are seen by many as not carrying sufficient renown), concerns about copyright, dissuasive influence of author-side fees, the lack of useful data on OA's evolution, perceived lack of profitability surrounding OA business models (Science-Metrix/EC, 2013)

[xi] According to a study from 2010 referred to in Science-Metrix's report, uncertainty over embargo periods and concern over copyright infringement were amongst the most common concerns of authors regarding the deposit of research papers in OA repositories.

Lack of data on OA. Most studies investigating the quantitative development of OA publishing focus on subsets of data (e.g., providing information on OA for specific years only) and use variable methods. This causes difficulties, particularly in examining how OA has developed across time. "Better data and analysis would help provide stakeholders with important information on OA repository costs, impacts and operational statistics and determine the operational viability of alternative OA publishing models."

4. SUMMARY: OPEN ACCESS POLICIES TO RESEARCH PUBLICATIONS – RELEVANCE FOR THE UNIVERSITY SECTOR AND ISSUES FOR FUTURE CONSIDERATION

This briefing outlines how policy related to OA to research publications has developed considerably in Europe in recent years. Although the selection of policy positions and studies presented is not exhaustive, it does provide evidence that there is a clear trend towards the creation and consolidation of frameworks for the open sharing of publicly funded research results. The series of policy positions and recommendations reported here have a complementary nature because they draw attention to a variety of different OA matters. Crucially though, the positions remain aligned in terms of their support for an OA policy to research publications, either through the green or gold routes. The stakeholder positions provide pertinent information highlighting, for instance, the importance of developing institutional policies and strategies that foster the availability of research findings in general, and the establishment of institutional repositories in particular.

Several challenges faced by universities are also highlighted, such as the need for raising awareness and promoting OA within the academic community and, importantly, adopting sustainable, cost-effective business models for OA that are compatible with university budget limitations. Likewise, increased clarity regarding the different business models for OA publishing and their advantages would be both timely and valuable. From the point of view of universities, fostering an understanding of the opportunities, consequences and impact of OA for researchers, and for institutions more generally, will be essential to support a successful transition to OA.

While the general recommendations made by EUA in 2008 remain valid today, more recent developments in the field of OA require further debate among the different actors (universities, research institutes, research funders, governments and publishers, with the latter usually seen as being "on the other side" of the negotiation table). The framework set up by H2020, whereby contracts provide financial support for OA, and the fact that the EC takes a neutral position on whether these resources are used to pursue the green or gold routes, are good basic conditions to foster the publication of research outcomes in OA.

The literature consulted indicates that OA to research publications is a key means to improve the circulation of knowledge, and therefore innovation. It is also indicated that OA can increase the efficacy and efficiency of research by promoting faster and wider access to scientific information and by enhancing the dissemination and use of research outcomes. OA can also result in heightened research visibility due

to an increased number of citations. Also crucial is the fact that the benefits of OA are becoming more widely recognised by researchers, research institutions, governments and publishers.

From EUA's perspective, and taking into consideration existing policies, as well as expert input and advice gathered so far from EUA's membership, the key issues to be addressed in the field of OA can be summarised as follows:

a) business models and costs of OA, including addressing "double dipping" situations where institutions are faced with the payment of subscriptions for their incoming research in addition to the payment of gold OA for their outgoing research;
b) requirement for self-archiving of research publications in institutional (or shared) repositories;
c) peer-review and quality assessment in OA, with an emphasis on the issues relative to journals' impact factor and the existence or lack of incentives for researchers to foster OA;
d) difficulty in assessing the progress of OA and its impact in the advancement of research due to limited data available on OA; and
e) implications for key players, such as researchers, institutions, policy makers, funding bodies and publishers.

Since OA to scientific publications is a complex and constantly developing field, these issues can be expected to evolve. Clearly, OA will remain a high priority on the EU political agenda given its positive effects on fostering the dissemination, transfer and use of research results and, thus, the effectiveness of the ERA as a whole. The on-going survey of EUA's members will provide further information on the initial list of key issues above and will give additional insight into the field of institutional OA policy development. EUA is committed to continuing to foster the debate on OA to research publications in order to enhance the dissemination of, and greater access to, university-generated knowledge. EUA is similarly committed to contributing towards a publishing system that aims to achieve a balance of costs and benefits shared between commercial publishing organisations on the one hand and universities and their researchers on the other, the latter having simultaneously the critical roles of producers of research and peer-reviewers of research publications.

5. REFERENCES

[1] European Commission, 2012, *COM(2012) 392 final: A Reinforced European Research Area Partnership for Excellence and Growth* (Brussels, European Commission).

[2] European Commission, 2013, *Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020*. Version 1.0. (Brussels, European Commission).

[3] European University Association, 2008, *Recommendations from the EUA Working Group on Open Access adopted by the EUA Council on 26 March 2008 (University of Barcelona, Spain)* (Brussels, EUA).

[4] Digital Agenda for Europe - European Commission, http://ec.europa.eu/digital-agenda/.

[5] *Joint Declaration by the European Association of Research and Technological Organisations (EARTO), the European University Association (EUA), the League of European Research Universities (LERU), NordForsk, Science Europe (SE), the Conference of European Schools for Advanced Engineering Education and Research (CESAER) and the European Commission on working in partnership in achieving the European Research Area*, 2013, Retrieved on 17 July 2014 from http://ec.europa.eu/research/era/pdf/joint_declaration_2013.pdf.

[6] *Budapest Open Access Initiative*, 2002. Retrieved on 31 July 2014 from: http://www.budapestopenaccessinitiative.org/read.

Ten years on from the Budapest Open Access Initiative: setting the default to open, 2012. Retrieved on 31 July 2014 from http://www.budapestopenaccessinitiative.org/boai-10-recommendations.

Bethesda Statement on Open Access Publishing, 2003. Retrieved on 31 July 2014 from http://legacy.earlham.edu/~peters/fos/bethesda.htm.

Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, 2003. Retrieved on 31 July 2014 from http://openaccess.mpg.de/286432/Berlin-Declaration. See also *Signatories of the Berlin Declaration*. Retrieved on 31 July 2014 from http://openaccess.mpg.de/319790/Signatories.

[7] Suber, P., 2013, *Open Access Overview. Focusing on open access to peer-reviewed research articles and their preprints.* Retrieved on 31 July 2014 from http://legacy.earlham.edu/~peters/fos/overview.htm.

[8] League of European Research Universities, 2012, *Statement on Open Access to Research Publications* (Brussels, LERU).

[9] European Commission, 2012, *European Commission background note on open access to publications and data in Horizon 2020* (Brussels, European Commission).

[10] Björk, B., & Solomon, D. J., 2014, *Developing an Effective Market for Open Access Article Processing Charges. Final Report to a consortium of research funders comprising Jisc, Research Libraries UK, Research Councils UK, the Wellcome Trust, the Austrian Science Fund, the Luxembourg National Research Fund and the Max Planck Institute for Gravitational Physics* (London, Wellcome Trust).

[11] Suber, P., 2008, *Green/Gold OA and Gratis/Libre OA*. Retrieved on 17 September 2014 from http://openaccess.eprints.org/index.php?/archives/442-guid.html and http://legacy.earlham.edu/~peters/fos/newsletter/08-02-08.htm#gratis-libre.

[12] Conferenza dei Rettori delle Università italiane (CRUI), *Gruppo Open Access 2006-2013*. Retrieved on 31 July 2014 from www.crui.it/HomePage.aspx?ref=2219.

[13] National Center for Scientific Research (CNRS), 2012, *Towards "Open Science"? – Overview in the CNRS 2012 Activity Report*, pp. 60-61 (Paris, CNRS).

[14] The Alliance of Science Organisations in Germany, 2008, *Priority Initiative "Digital Information"*. Retrieved on 31 July 2014 from www.hrk.de/en/alliance/positions/alliance-11-june-2008/.

[15] German Rectors' Conference/Hochschulrektorenkonferenz (HRK), 2009, *Open Access and Copyright: No encroachment on the freedom of publication*. Retrieved on 31 July 2014 from www.hrk.de/en/press/press-releases/press-release/meldung/open-access-and-copyright-no-encroachment-on-the-freedom-of-publication-1193/.

[16] German Rectors' Conference/Hochschulrektorenkonferenz (HRK), 2011, *Position Paper on the Structure of the 8th EU Research Framework Programme (2014-2020)*. Retrieved on 31 July 2014 from www.hrk.de/en/resolutions-publications/resolutions/resolution/convention/position-paper-on-the-structure-of-the-8th-eu-research-framework-programme-2014-2020/.

[17] German Rectors' Conference/Hochschulrektorenkonferenz (HRK), 2011, *Opinion on the Green Paper "Towards a Common Strategic Framework for EU Research and Innovation Funding"*. Retrieved on 31 July 2014 from www.hrk.de/en/resolutions-publications/resolutions/resolution/convention/opinion-on-the-green-paper-towards-a-common-strategic-framework-for-eu-research-and-innovation-fund/.

[18] German Rectors' Conference/Hochschulrektorenkonferenz (HRK), 2012, *Higher education institutions in a digital age: rethinking information competency – redirecting processes*. Retrieved on 31 July 2014 from www.hrk.de/en/resolutions-publications/resolutions/resolution/convention/higher-education-institutions-in-a-digital-age-rethinking-information-competency-redirecting-pr/.

[19] Irish Universities Association, 2012, *Government launches National Open Access Statement – 23 Oct 2012*. Retrieved on 31 July 2014 from www.iua.ie/governement-launches-national-open-access-statement-23-oct-2012/.

[20] Irish Universities Association, 2012, *Open Access to Irish University Research*. Retrieved on 31 July 2014 from www.iua.ie/wp-content/plugins/wp-publication-archive/includes/openfile.php?file=http|www.iua.ie/wp-content/uploads/2012/09/Open_Access.pdf.

[21] The Norwegian Association of Higher Education Institutions (UHR), 2009, *Greater access to Norwegian scientific publications*. Retrieved on 31 July 2014 from www.uhr.no/documents/Short_Version_UHR_ReportEnglish.pdf.

[22] Open Repository and Bibliography (ORBi). Retrieved on 31 July 2014 from http://orbi.ulg.ac.be/. See also http://orbi.ulg.ac.be/handle/2268/102031.

[23] Harnad, S., 2013a, *Immediate vs. Delayed Access*. Retrieved on 17 September 2014 from http://openaccess.eprints.org/index.php?/archives/1083-Immediate-vs.-Delayed-Access.html.

[24] *Open Repository and Bibliography (ORBi) – Benefits and challenges*. Retrieved on 22 September 2014 from http://orbi.ulg.ac.be/project?id=104. See also Rentier, B. & Thirion, P., 2011, 'The Liège ORBi model: Mandatory policy without rights retention but linked to assessment processes', paper presented at the *Berlin 9 Pre-conference on Open Access policy development Workshop*, Washington, DC, United States of America, 8 November.

[25] Renaville, F., *et al.*, 2012, *L'Open Access en Belgique francophone Étude de la BICfB réalisée à la demande des Recteurs des universités et du F.R.S.-FNRS* (Bibliothèque Interuniversitaire de la Communauté française de Belgique, BICfB).

[26] University of Luxembourg, 2012, *The University of Luxembourg participates in the « Open Access » initiative*. Retrieved on 31 July 2014 from wwwen.uni.lu/press/press_releases/2012/11_05_2012_the_university_of_luxembourg_participates_in_the_open_access_initiative.

[27] *Open Repository and Bibliography University of Luxembourg (ORBi^{lu})*. Retrieved on 31 July 2014 from http://orbilu.uni.lu/.

[28] Universities UK (UUK), 2007, *Publishing research results: the challenges of open access*. Retrieved on 31 July 2014 from www.universitiesuk.ac.uk/highereducation/Pages/PublishingResearchResults.aspx.

[29] Universities UK (UUK), 2012, *Universities UK welcomes Dame Janet Finch report on open access*. Retrieved on 31 July 2014 from www.universitiesuk.ac.uk/highereducation/Pages/DameJanetFinchReport.aspx.

[30] Universities UK (UUK), 2013, UUK submission of written evidence to the Commons Business, Innovation and Skills Committee inquiry on Open Access. Retrieved on 31 July 2014 from Universities UK (UUK), www.universitiesuk.ac.uk/highereducation/Pages/UUKopenAccessSubmission.aspx.

[31] Universities UK (UUK), 2013, *Universities UK response to open access progress report*. Retrieved on 31 July 2014 from Universities UK (UUK), www.universitiesuk.ac.uk/highereducation/Pages/OpenAcessProgressReport.aspx.

[32] League of European Research Universities, 2011, *Advice Paper: The LERU Roadmap Towards Open Access* (Brussels, LERU).

[33] League of European Research Universities, 2013, *LERU takes concrete steps towards ERA: A briefing paper on LERU's actions in the context of the Memorandum of Understanding signed by the European Commission and LERU on 17 July 2012* (Brussels, LERU). See also *Press Release: LERU takes concrete steps towards ERA*, 2013. Retrieved on 31 July 2014 from www.leru.org/index.php/public/news/press-release-leru-takes-concrete-steps-towards-era/.

[34] Science Europe, 2013a, S*cience Europe Roadmap* (Brussels, SE).

[35] Science Europe, 2013b, *Science Europe Position Statement: Principles for the Transition to Open Access to Research Publications* (Brussels, 2013).

[36] *NordForsk's policy on Open Access*, 2013. Retrieved from www.nordforsk.org/en/policy/europeisk-niva-1/nordforsks-policy-pa-open-access.

[37] NordForsk, 2014, *Final Report on the Achievements under the Memorandum of Understanding between the European Commission and NordForsk* (Oslo, NordForsk).

[38] Open Repository and Bibliography (ORBi). Retrieved on 31 July 2014 from http://orbi.ulg.ac.be/. See also http://orbi.ulg.ac.be/handle/2268/102031.

[39] Initiative for Science in Europe (ISE), 2014, *ISE Statement on Learned Societies, Academic Publishing and Transitions to Open Access* (Heidelberg, Initiative for Science in Europe).

[40] Initiative for Science in Europe (ISE). Retrieved on 31 July 2014 from www.initiative-science-europe.org/.

[41] Global Research Council, 2013, *Action Plan towards Open Access to Publications. Endorsed during the 2nd Annual Global Meeting, 27-29 May 2013, Berlin/Germany* (Berlin, Global Research Council).

[42] European Commission, DG for Research and Innovation, 2008, *Open access: Opportunities and challenges: A handbook* (Brussels, European Commission).

European Commission, 2008, *MEMO/08/548: The European Commission's Open Access Pilot for Research Articles: Frequently Asked Questions* (Brussels, European Commission).

European Commission, DG for Research and Innovation, 2011, *Sharing knowledge: Open access and preservation in Europe: Conclusions of a strategic workshop - Brussels, 25-26 November 2010* (Brussels, European Commission).

European Commission, DG for Research and Innovation, 2012, *Survey on open access in FP7* (Brussels, European Commission).

European Commission, 2012, *COM(2012) 401 final: Towards better access to scientific information: Boosting the benefits of public investments in research* (Brussels, European Commission).

European Commission, 2012, *C(2012) 4890 final: Commission Recommendation of 17.7.2012 on Access to and preservation of scientific information* (Brussels, European Commission).

For a comprehensive list of policy documents and reports please see: http://ec.europa.eu/research/science-society/index.cfm?fuseaction=public.topic&id=1301.

[43] See also the European Commission, 2014, *MEMO/14/405: State of the Innovation Union - Taking stock 2010 – 2014* (Brussels, European Commission).

[44] European Commission, 2013, *IP-13-786: Open access to research publications reaching 'tipping point'* (Brussels, European Commission).

European Commission, 2013, *Fact sheet: Open Access in Horizon 2020* (Brussels, European Commission).

European Commission, 2013, *Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020. Version 1.0* (Brussels, European Commission).

[45] European Commission, 2010, *COM(2010) 546 final: Europe 2020 Flagship Initiative Innovation Union* (Brussels, European Commission).

[46] OpenAire, www.openaire.eu/.

[47] European Research Council (ERC) 2013, *Open Access Guidelines for researchers funded by the ERC (revision)* (Brussels, ERC).

See also European Research Council (ERC), 2012, *Open Access Guidelines for researchers funded by the* European Research Council (Brussels, ERC); and European Research Council (ERC), 2007, *ERC Scientific Council Guidelines for Open Access* (Brussels, ERC).

[48] European Research Council (ERC), 2012, *Press Release: European Research Council renews its commitment to open access by joining Europe PubMed Central* (Brussels, ERC).

[49] Caruso, J., Nicol, A., & Archambault, E., 2013, *Open Access Strategies in the European Research Area. Report commissioned by the European Commission DG Research & Innovation Unit B6* (Montréal, Science-Metrix).

[50] Harnad, S., 2013b, *Potential CHORUS catastrophe for OA: How to fend it off*. Retrieved on 17 September 2014 from http://openaccess.eprints.org/index.php?/search/cope/P1.html.

[51] Harnad, S., 2013c, *Immediate vs. Delayed Access*. Retrieved on 17 September 2014 from http://openaccess.eprints.org/index.php?/archives/1083-Immediate-vs.-Delayed-Access.html