

SCIENTIFIC COMMUNICATION & DISSEMINATION ACTIVITY

why it is important for you

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**How do you disseminate
your research activity?**

Do you think it is important?

Discussion?



Not only scientific publications



The starting point

Becoming aware on scientific communication and dissemination

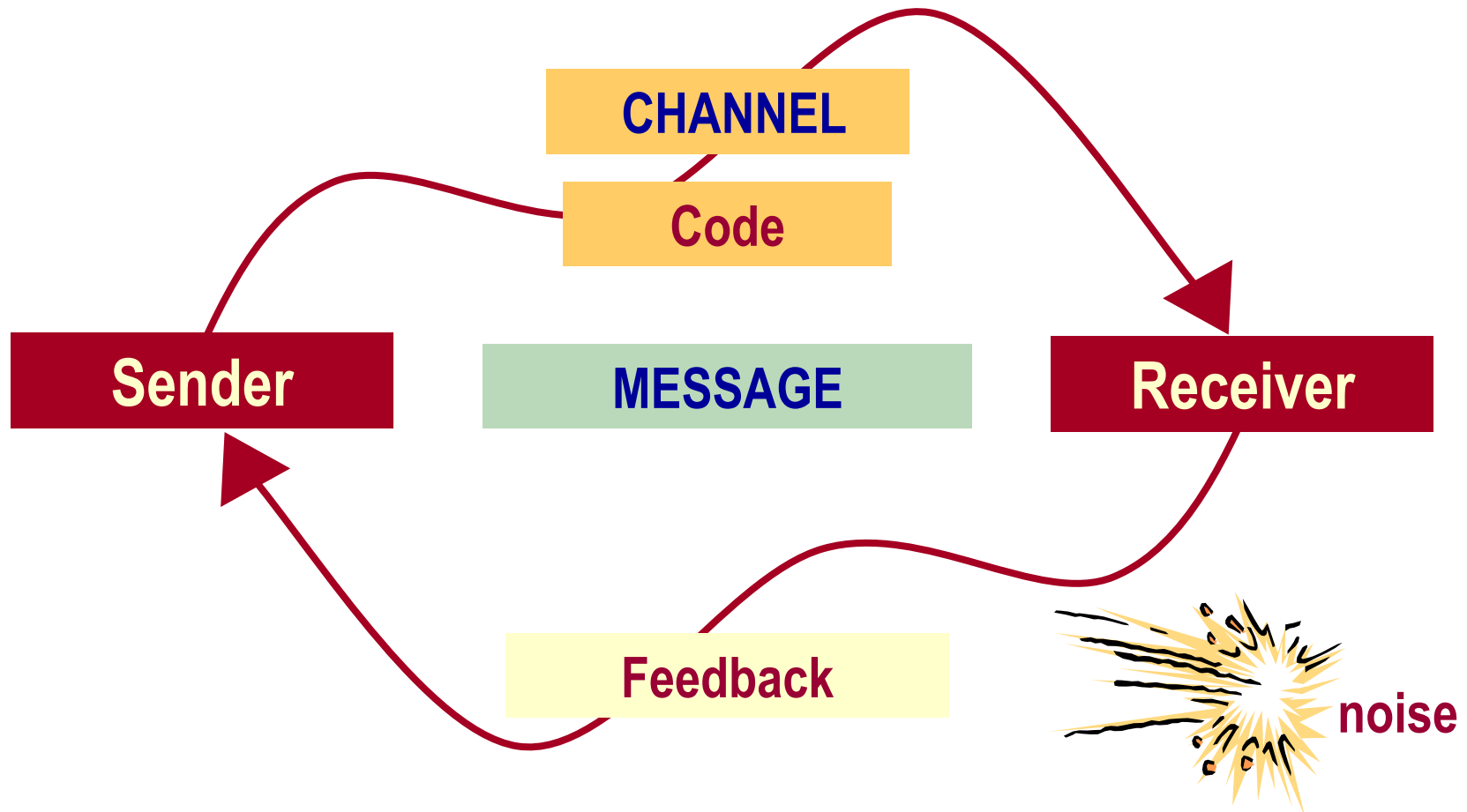
3 Assumptions

- Relevance
- Target and types
- Rules and best practices



COMMUNICATION PROCESS

Basic elements



Communication is sharing, not just providing information!
Keep it in mind to understand possible barriers



1 Relevance

Communication and dissemination is
an important part of **RESEARCH ACTIVITY**

WHY?

Look for possible answers in the following slides



WHY is scientific communication RELEVANT FOR YOU?



Suggestions

- Progress is always based on previous work
- Scientists have a responsibility for communicating research results
- Patients need to be informed
- All stakeholders (policy makers, general public) should be aware of the value of scientific research
- Health is a common good
- We live in a “global” world



Responsibility of science communication

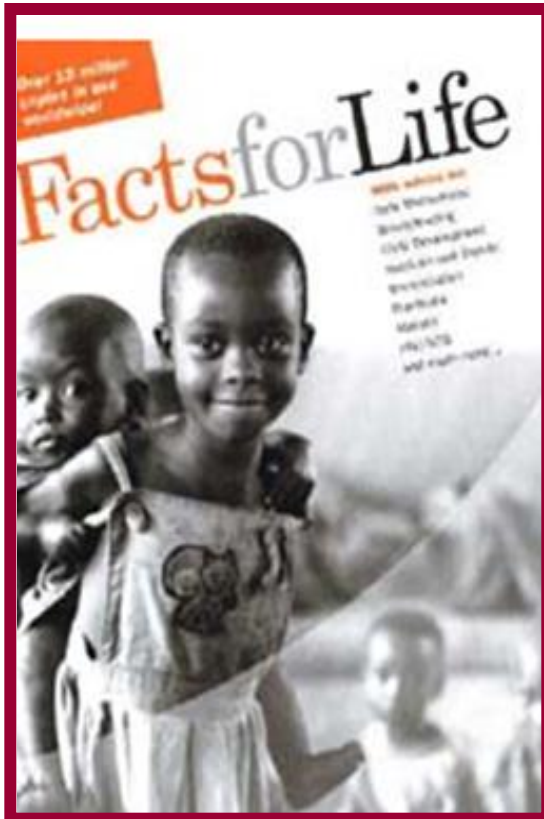
For all people working in Research and Development

Information transfer is
an **ESSENTIAL** part of their work

*It is a responsibility that must be
recognised and undertaken
with the same commitment and professionalism
as all the other science-related activities.*



It is important to share information at different levels, to different stakeholders, in a global health perspective.



Health knowledge can often mean the difference between life and death

Each year, around 9 million children die from preventable and treatable illnesses

The handbook produced by UNICEF, WHO, UNESCO provides vital messages and information for mothers, fathers, other family members, caregivers and communities



Internet provides tools

We are aware of the “digital divide”

BUT even when Internet is available it is important to know

- where to find such tools
- how to recognize quality information
- how to use it

A cultural change is still required and it is associated with the capacity to use resources provided by information technologies and to produce new and useful online resources



New trends: BE OPEN!

WHAT DOES IT MEAN?

- Open sharing of research activity
- Open online information
- Open Access journals
- Open peer-review
- Open data sharing
- Open to patients/society
- Open in disclosure conflicts of interest
- Open online courses (MOOCs)



A NEW STATE OF MIND



OA is a philosophy and not an archive

OA routes

OA journals (gold)

Digital archives (green)

CREATE AWARENESS
among all stakeholders

DOAJ DIRECTORY OF OPEN ACCESS JOURNALS

9804 Journals
8556 Journals searchable at Article level
124 Countries
1873847 Articles

10,000 OA

OpenDOAR

Directory of Open Access Repositories

Home | Find | Suggest | Tools | FAQ | About | Contact Us

The Directory of Open Access Repositories - OpenDOAR

2200 listings

OpenDOAR has over 2000 listings!

2200 listings

Growth of the OpenDOAR Database

Repositories by Continent

JISC



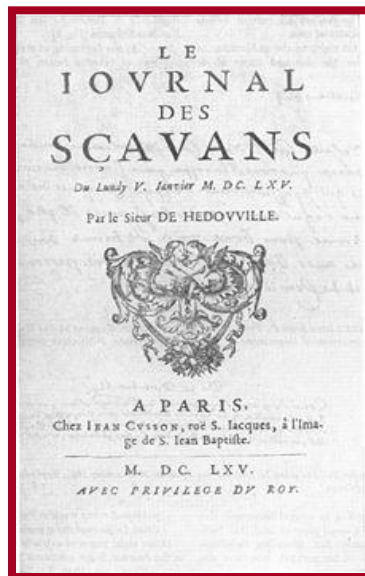
SCIENTIFIC JOURNALS

rise in the 17th century in the academies

Before, philosophers communicated through philosophical dissertations & letters

Journal des Scavans

First journal, published in Paris 1665

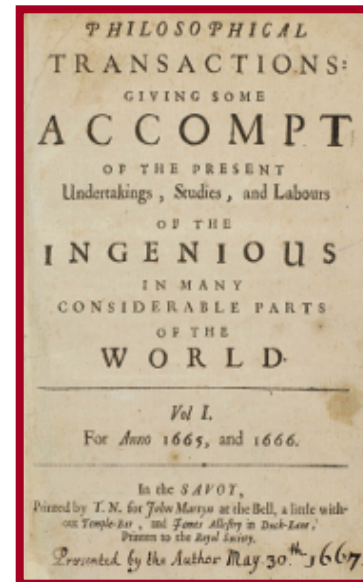


OBJECTIVE

Present the most relevant European scientific papers

Philosophical Transactions

Royal Society of London, 1666



OBJECTIVES

Inform the Royal Society members and other readers about scientific discoveries

Establish principles scientific priority and peer review

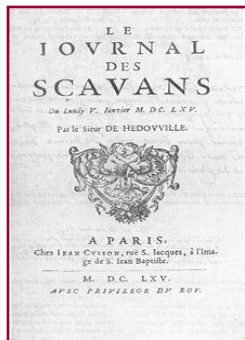


Role of scientific journals

Despite the changes introduced by the Internet in communication, scientific journals still represent the most widely recognized means for communicating research results of among peers.

Scientific journals:

- represent the dynamic memory of science (started in 1660)
- rely on a consolidated know-how and editorial structure
- guarantee quality control, dissemination, indexing and impact evaluation of published articles.



The article of the future

5 minute video by Elsevier

It shows the advantages of enriched articles including supplementary information interactive content.

It provides true immersion in the context of the subject matter. Data are linked to databases providing the most updated information

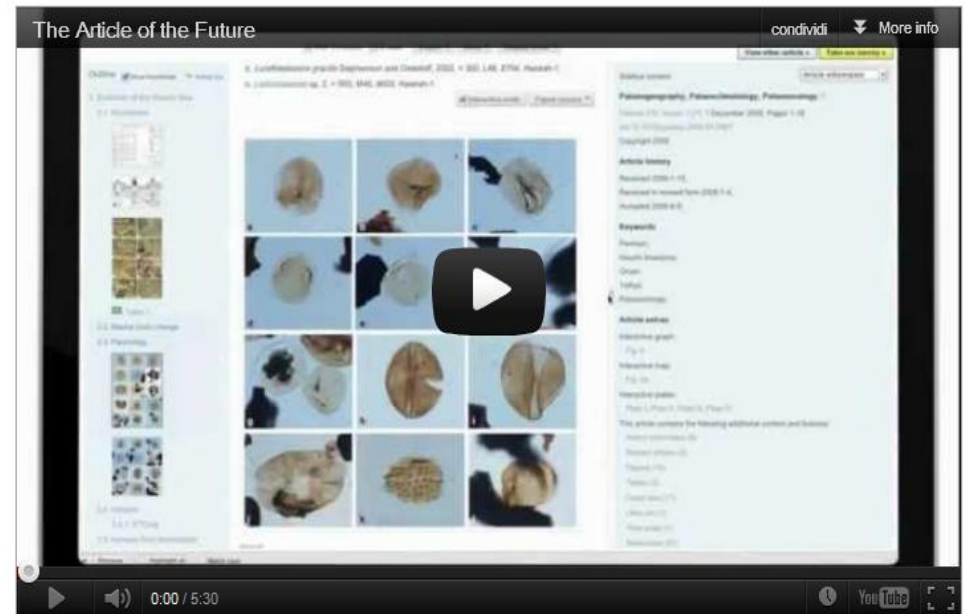
It proves a positive correlation among data sharing, citations and impact.

The Article of the Future is now live! Have you experienced it?

Resulting from the Article of the Future project innovations, we are now able to announce the SciVerse ScienceDirect redesigned article page, with a new layout including a navigational pane and an optimized reading middle pane.

The Article of the Future project- an ongoing initiative aiming to revolutionize the traditional format of the academic paper in regard to three key elements: presentation, content and context.

Learn what we are doing and why by viewing the video below.



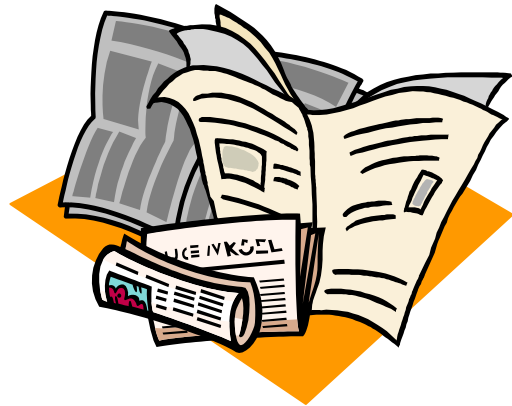
Last year, we introduced you to the Article of the Future project along with prototypes in 7 scientific areas. To achieve this evolution of the traditional research article, a three-pane article view has been proposed, which separates navigation (left pane) and value-added enhancements (right pane) from the core article (middle pane). Find out more in our [About](#)



TODAY INTERNET

allows new ways of communication

Journals (and books)
change their shape



New ways are developed

- Blogs
- Discussion lists
- Wikis
- Online answers
- Social networks
- Collective conversations



WIKIPEDIA
The Free Encyclopedia

BMJ Group Blogs

BMJ Group blogs

facebook



All this deeply affects
scientific communication



Internet changes economic models & allows new metrics



- Publishers are looking for new opportunities
Journal **PRICES** grow exponentially
- Authors become aware of the new opportunities provided by ICT
& start **NEGOTIATE THEIR RIGHTS** (*self archiving is now recognised by most publishers*)
- Online free full text is generally required
& also the availability of **RESEARCH DATA** is desired
- New **EVALUATION METRICS** are introduced
as alternative to IF, e.g. H index (*individual research output*)
- OA journals utilizing **FREE SOFTWARE** are developed

CASA training will include
some modules on these issues

There is **CONFUSION** on the roles of the actors
of the editorial process and some contradictions



Publications in the world (2008=986.099)

United States	↓	28%
European Union	↓	37%
China	↑	10%
Japan		8%
Russia		7%

USA & EU are still the world leaders as for the absolute number of scientific publications. Yet, their percentage share of publications decreased much more than any other country in the last 6 years. On the other hand, China doubled its publications (10%).

Considering the size of Asian population it is envisaged that it will become the leader continent as for publication output in the coming years.

Latin America
Africa

4.9%

2.2%

due primarily to Brasil
with 25% increase
in the last 6 years

UNESCO, *Science report 2010 – Based on ISI data*
Data refer to 2008, now the situation is rapidly changing



Citation increase in OA journals

Open access citation average. A. Swan

http://eprints.ecs.soton.ac.uk/18516/2/Citation_advantage_paper.pdf

Measure	Result
Studies finding a positive Open Access citation advantage	27
Studies finding no Open Access citation advantage (or an OA citation disadvantage)	4

Size of OA citation advantage when found (and where explicitly stated by discipline)	% increase in citations with Open Access
Physics/astronomy	170 to 580
Mathematics	35 to 91
Biology	-5 to 36
Electrical engineering	51
Computer science	157
Political science	86
Philosophy	45
Medicine	300 to 450
Communications studies (IT)	200
Agricultural sciences	200 to 600

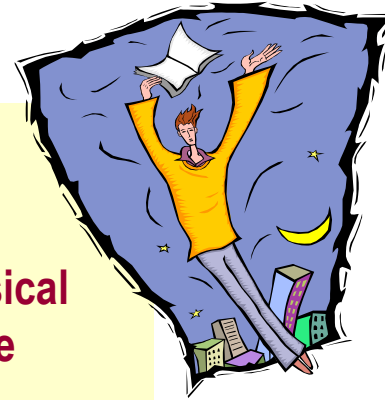


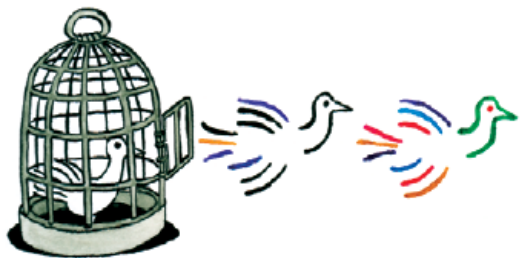
OPEN ACCESS

a new paradigm of communication

Basic concepts from the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003)

- Our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society.
- New possibilities of knowledge dissemination not only through the classical form but also and increasingly through the open access paradigm via the Internet have to be supported.
- We define open access as a comprehensive source of human knowledge and cultural heritage that has been approved by the scientific community.
- In order to realize the vision of a global and accessible representation of knowledge, the future Web has to be sustainable, interactive, and transparent. Content and software tools must be openly accessible and compatible.





Open Access

now

July 14, 2003

Campaigning for freedom of research information

Editor: Jonathan Weitzman

Editorial

Opening the cage door

Today we launch *Open Access Now*, had been similarly imprisoned, rather than

UK supports Open Access

The UK leads the world in a revolution to provide Open Access to scientific research.

... it requires the active **commitment of each and every individual** producer of scientific knowledge and holder of cultural heritage.

Open access contributions include original scientific **research results, raw data** and **metadata**, source materials, digital representations of pictorial and graphical materials and scholarly multimedia material.



Open Journal Systems

A Sample of Journals Using Open Journal Systems | Public Knowledge Project - Windows Internet Explorer

PKP | PUBLIC KNOWLEDGE PROJECT

Search this site:

Download Find Help Stay Informed Get Involved Donate!

A Sample of Journals Using Open Journal Systems

This is not a comprehensive list of the over 7500 titles using OJS (as of December 2010), but includes those who have indicated an interest in being listed, and is intended to illustrate the diversity of journals using system.

Because this list is intended to showcase journals using OJS **it does NOT include any non-OJS journals**. If your non-OJS journal is looking for inclusion in an open access database, we strongly recommend the [Directory of Open Access Journals](#).

If your OJS journal is not on this list, and you would like it to be considered for inclusion, please register it using [this form](#).

PKP PUBLIC KNOWLEDGE PROJECT

Software Research Partners Support

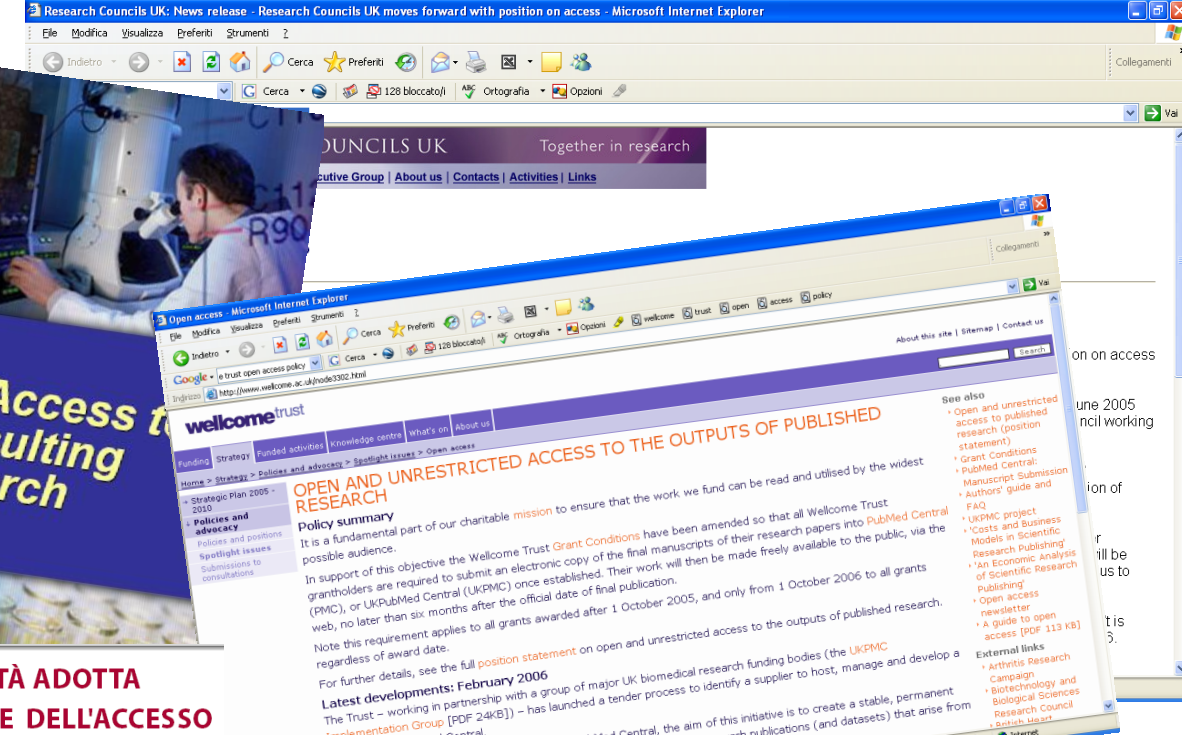
PKP is a multi-university initiative developing (free) open source software and conducting research to improve the quality and reach of scholarly publishing.

Free software for online journal management

Over 11,500 journals



Policy on Enhancing Public Access to Archived Publications Resulting From NIH-Funded Research



NEWS

L'ISTITUTO SUPERIORE DI SANITÀ ADOTTA UNA POLITICA INNOVATIVA A FAVORE DELL'ACCESSO APERTO ALLE PUBBLICAZIONI SCIENTIFICHE

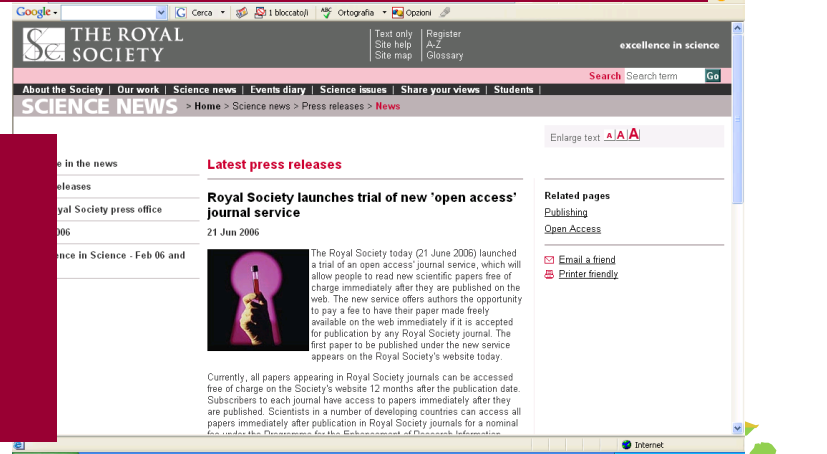
Internet ha rivoluzionato il nostro modo di comunicare e di ricercare le informazioni in ogni momento della giornata, lavorativa e non. In particolare, in ambito accademico la circolazione delle informazioni in rete è diventata un elemento discriminante ai fini della diffusione e della valutazione dei risultati della ricerca. L'accesso alle informazioni scientifiche, in special

alle spese editoriali da parte dell'autore. È qui, ad esempio, il caso di alcune riviste del gruppo Springer (formula "Springer Open Choice"). Se l'autore non contribuisce alle spese per il libero accesso, gli articoli pubblicati saranno visibili soltanto da parte di chi ha attivato un abbonamento alla rivista o versa un contributo per vedere l'articolo.

Development of OA policies

In 2007, ISS signed an OA policy (the first health research institute in Italy with an OA policy)

In 2013, ISS signed a Position paper supporting Open Access to research data



OA, a moral imperative

National and international institutions and funding organizations support OA to research information and data

Issue policies and recommendations with varying embargo periods

- NIH
- European Commission
- Wellcome trust
- Telethon
- Italian research institutes
-

The image displays two screenshots of Open Access (OA) policy pages. The top screenshot is from the U.S. Department of Health & Human Services, National Institutes of Health (NIH). It features the NIH logo and the text: "National Institutes of Health Public Access. The Public Access Policy ensures that the public has access to the published results of NIH funded research to help advance science and improve human health." Below this, there is a navigation menu with "Home" and "Overview" highlighted. The "Overview" section lists steps: "1. Determine Applicability", "2. Address Copyright", "3. Submit paper to PMC", and "4. Include BMCTD in". The bottom screenshot is from the European Commission's "RESEARCH & INNOVATION Science in Society" portal. It includes the European Union flag and the text: "Welcome to the Science in Society portal". A "Policy Initiatives" section is highlighted, with "Open Access" selected in a sidebar. The main content area under "OPEN ACCESS" explains that open access refers to granting free Internet access to research articles and that the Commission's objective is to optimize the impact of publicly-funded scientific research.



NEW TRENDS

December 2013
European
Commission

Open up publicly funded research data



EUROPEAN COMMISSION

PRESS RELEASE

Brussels, 16 December 2013

Commission launches pilot to open up publicly funded research data

Valuable information produced by researchers in many EU-funded projects will be shared freely as a result of a Pilot on Open Research Data in Horizon 2020. Researchers in projects participating in the pilot are asked to make the underlying data needed to validate the results presented in scientific publications and other scientific information available for use by other researchers, innovative industries and citizens. This will lead to better and more efficient science and improved transparency for citizens and society. It will also contribute to economic growth through open innovation. For 2014-2015, topic areas participating in the Open Research Data Pilot will receive funding of around €3 billion.

The Commission recognises that research data is as important as publications. It therefore announced in 2012 that it would experiment with open access to research data (see [IP/12/790](#)). The Pilot on Open Research Data in Horizon 2020 does for scientific information what the Open Data Strategy¹ does for public sector information: it aims to improve and maximise access to and re-use of research data generated by projects for the benefit of society and the economy.



2 Target & types

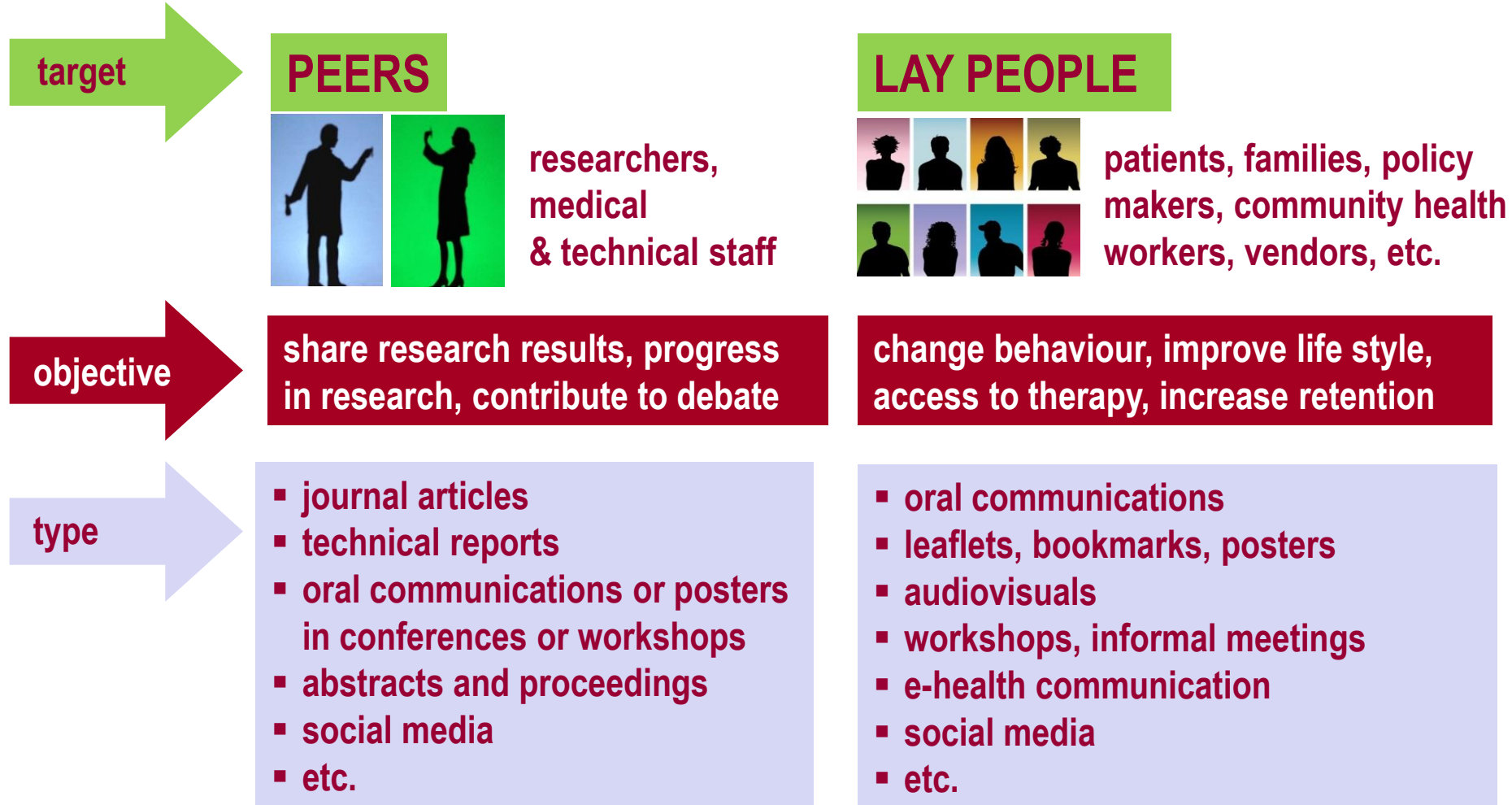
It is important to select the most appropriate communication tool according to target and context

WHY?

Look for possible answers in the following slides



Different targets, objectives & types of scientific communication



GENERAL ADVICE for researchers

TIPS FROM EXPERIENCE



- Plan your work in advance
- Select the best type of communication (target, objective, context)
- Consider time and resources available

- Define authorship & responsibilities (collaborators)
- Consider previous work (bibliographic search)
- Follow instructions to authors (if available)
- Produce a first draft

- Revise the draft, seek advice, share, test the product
- Submit for publication (peer review process)
- Approve final draft

- Disseminate (online, print, share, talk, link, etc.)



Value of scientific journals



Considering readers' requirements

WRITE A USEFUL ARTICLE to contribute to the progress of science

QUESTIONS

- Which information needs shall I meet?
- Are there other publications on the same topic?
- Are they up-dated?
- Are they useful?
- Are they easily available?
- Are they free on the Internet?

- WHY write an article?
- WHERE to publish it?
- WITH whom?
- HOW much time?
- WHICH budget?

*In some cases, national journals or books
may be more appropriate*



Value of scientific journals

Considering authors' requirements

PUBLISH IN QUALITY JOURNALS (IF)
to obtain the highest evaluation
(grants, career advancement)



QUESTIONS

HOW TO SELECT THE JOURNAL?

- Indexed journals (IF)
- Journals where important authors publish
- High rejection rate journals
- Journals which I read for updating

WHAT TO CONSIDER?

- Where is the journal indexed
- Editorial committee
- Editorial organization (policy) (peer review, time)
- Online availability
- Copyright issues...



AUTHORSHIP & INTELLECTUAL PROPERTY



1953

Watson e Crick published an article on DNA which is very famous and well known all over the world

... and what about Rosalind Franklin?



Watson J D, Crick FHC.
Molecular structure of nucleic acids:
a structure for deoxyribose nucleid acid.
Nature 1953; 171: 737-738.c



3 Rules & best practices

It is important to know standards, guidelines and tradition

WHY?

Look for possible answers in the following slides



Actors of the EDITORIAL PROCESS

authors

editors

publishers

readers

- Referees
- Technical editors
- Translators
- Graphic designers
- Photographers
- Printers
- Web masters
- Librarians
- Information specialists



Be aware of the role of each actor in the process
to be able to understand it and comply with their requirements



RESPONSIBILITIES

To be pointed out in CASA training program

AUTHORS

- Develop useful contents
- Select the appropriate document type
- Read instructions to authors
- Provide all information required by editors
- Do not cheat
- etc.

EDITORS

- Organize and validate information
- Guarantee publication integrity
- Create useful journals
- Write instructions for authors
- Specify steps of the editorial process
- etc.

REFEREES

- Guarantee quality of published papers
- Declare conflicts of interest
- Comply with schedules
- Respect privacy and confidentiality
- etc.



SCIENTIFIC EDITING *inside an editorial office*



Receiving manuscripts
First evaluation by editor in chief
Peer review (*reviewers/authors, reviewers, editor*)
Editor in chief (*acceptance/modification/ rejection*)

Scientific editing – graphics
(*correction of drafts*)
Receiving proofs
Article final copy

Complete issue
(including all articles)

TODAY ALL THIS IS ONLINE

Blueprint
Online dissemination
Print



WRITING A JOURNAL ARTICLE

a challenge between tradition and innovation

WARNING!

BE AWARE OF EDITORIAL RULES
AND BEST PRACTICES

1. evaluate scientific content and target
2. be familiar with technical requirements
3. be familiar with the publication ethics



FORMATS OF SCIENTIFIC ARTICLES





University of Toledo
Health Science Campus Homepage
Raymon H. Mulford Library Homepage
Acrobat Reader
Acrobat Reader Download (needed for PDF files)
Author Guidelines
COPE Guidelines
Uniform Requirements for Manuscripts Submitted to Biomedical Publication (Vancouver Style)
Conflict of Interest
ICMJE Conflict of Interest Form
Copyright
SHERPA Publisher Copyright Policies and Self- Archiving
SPARC Author's Addendum
Open Access
NIH Public Access Plan

These pages provide links to Web sites which provide instructions to authors for over 6,000 journals in the health and life sciences. All links are to "primary sources" - that is, to publishers and organizations with editorial responsibilities for the titles.



Comments and suggestions

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Alphabetical Listings of Journal Titles

Keyword Search
Enter a word or phrase


Journal Title
Enter the first few letters

Page last updated on:
Mon Apr 30 2012 11:41:03 GMT+0200 (ora legale Europa occidentale)

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Questions & comments: gerald.natal@utoledo.edu

**Instructions to authors
for over 6,000 journals in
the health and life sciences**

INSTRUCTIONS TO AUTHORS
First and last step for article writing.
Submit to the right journal!
Follow instructions!

Reporting Standards
NLM Research Reporting Guidelines and Initiatives
ASSERT Statement
CONSORT Statement

(Health Sciences Research Reporting Guidelines)
MOOSE Consensus Statement
PRISMA Statement
SQUIRE Statement
STROBE (STrengthening the Reporting of OBServational studies in Epidemiology)
Editor Standards
WAME (World Association of Medical Editors)



IMRAD structure

Introduction

- Background information
- State specific purpose of the study
- Limit references
- Do not include data or conclusions

Material and methods

- Describe (patients, animals, etc.)
- Define material and equipment
- Illustrate procedures
- Compare with other methods

Results

- Show results in logical order
- Point out only relevant data

And

Discussion and conclusions

- Stress only new aspects
- Do not repeat what was written in the methods
- Avoid conclusions which are not associated to reliable data



Example



REVISION: different levels of responsibility

1. AUTHORS' REVISION

before submission

- read instructions to authors
- read again after some time (one-two days)
- use check lists

2. INITIAL EDITORIAL REVIEW

after submission (before peer review)

A paper may be rejected by the editor, IF...

- it is not compliant with journal scope & formats
- it has poor English

3. PEER REVIEW

after submission

Minor revisions

Major revisions

Authors! Take it seriously!
Be prepared to answer
all points raised by reviewers

4. TECHNICAL EDITING

after acceptance

Journal editorial staff

Revision improves quality & provides a learning opportunity



Inspirational quote from Nelson Mandela

“

ACCEPT
THE CHALLENGE



“ It always seems impossible until it's done.”
tweet this →

”



To sum up ...



SCIENTIFIC COMMUNICATION

3

Assumptions



Relevance

Target & types

Rules & best practices

- Communication is part of research activity
- It is important to select the most appropriate communication tool according to objective, target and context
- It is important to know rules and best practices
- It is important to become aware of the importance of dissemination



TRAINING





thank you!

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