

Including Citizens in Science and Research

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**Information and Knowledge for All:
*Towards an Inclusive Innovation***

The World Conference on Intellectual Capital for Communities

UNESCO, July 3&4 2017

Citizen Science and Universities

Toward the inclusive Generation of Information and Knowledge

Citizen Science

Active involvement of non-professional scientists in Research

Rapidly evolving, many opportunities

Universities: Science/Research (and teaching)

Novel projects and ways to to interact with society

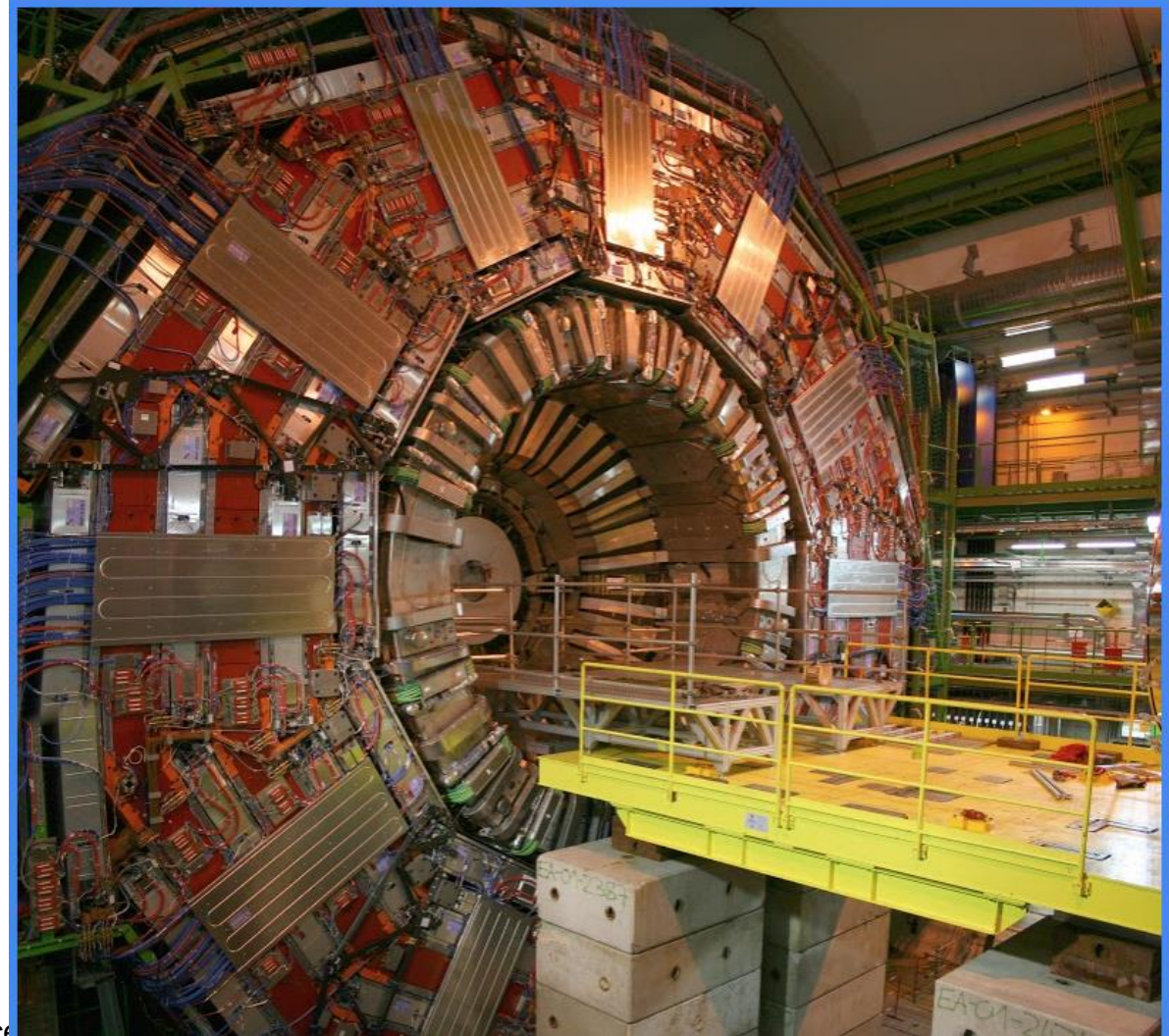
Integral part of open science

Early science was citizen science ,gentlemans science‘

J.L. David
Lavoisier and his wife



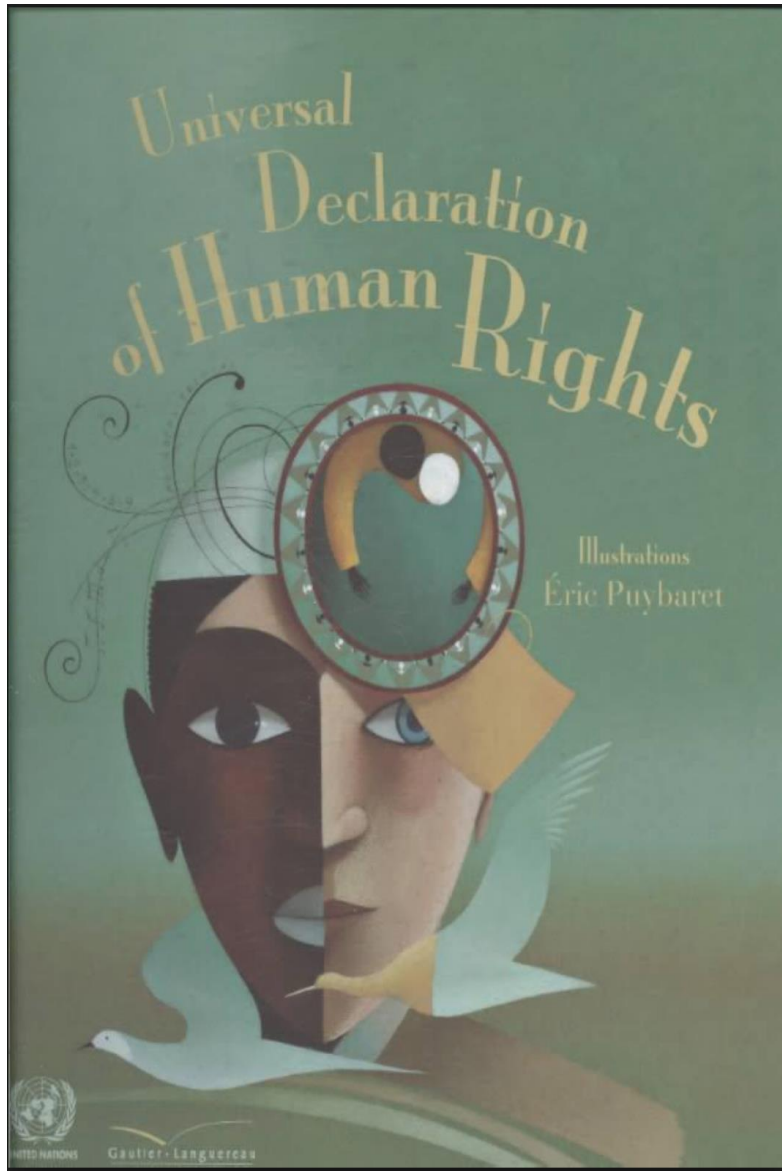
By 1900 professionalization, laboratories
*,The era of the amateur scientist is
passing, science must now be advanced by
the professional expert'*



The gap between public and
professional science is filled with

„Public deficit model“ (Wynne 1991)





Article 27: Right to participate in cultural life:

The right to share in scientific advancement and its benefits

Right to participate in the process of science, to citizen science? (Vayena and Tasioulas, 2015)



Distribution: general

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UNESCO/CUA/42-NE

PARIS, 2 May 1952

Translated from the French

Prof

UNITED NATIONS EDUCATIONAL,
SCIENTIFIC AND CULTURAL ORGANIZATION

PROGRAMME OF UNESCO FOR 1952

RESOLUTION 4.52

STUDY OF THE "RIGHT TO PARTICIPATE IN CULTURAL LIFE"

BASIC DOCUMENT

The first question of all to be considered, in relation to the present state of scientific knowledge, is: in what ways can the non-specialist take an active part in scientific advancement (experiments, observation of nature, sociological observation, etc.)? How may active participation of this sort profit the individual and science? How can it be encouraged and promoted?

Resurgence of citizens participation

New fields of research become interesting

Scepticism against 'official' science

New technologies (smartphone..)

University projects

Government projects

Activists projects, societies

Platforms, Do it Yourself kits





rich and diverse collaborations

The role of Universities

Universities have a long tradition of research and teaching

,Frame of mind‘

Highly motivated and diverse faculty and student body

Suitable infrastructures

Quality,Technical‘ skills (statistics, outreach, technology)

International and interdisciplinary networks

Highly respected in most countries, funding

High quality Citizen Science

Enlarges scope of research in all fields of science

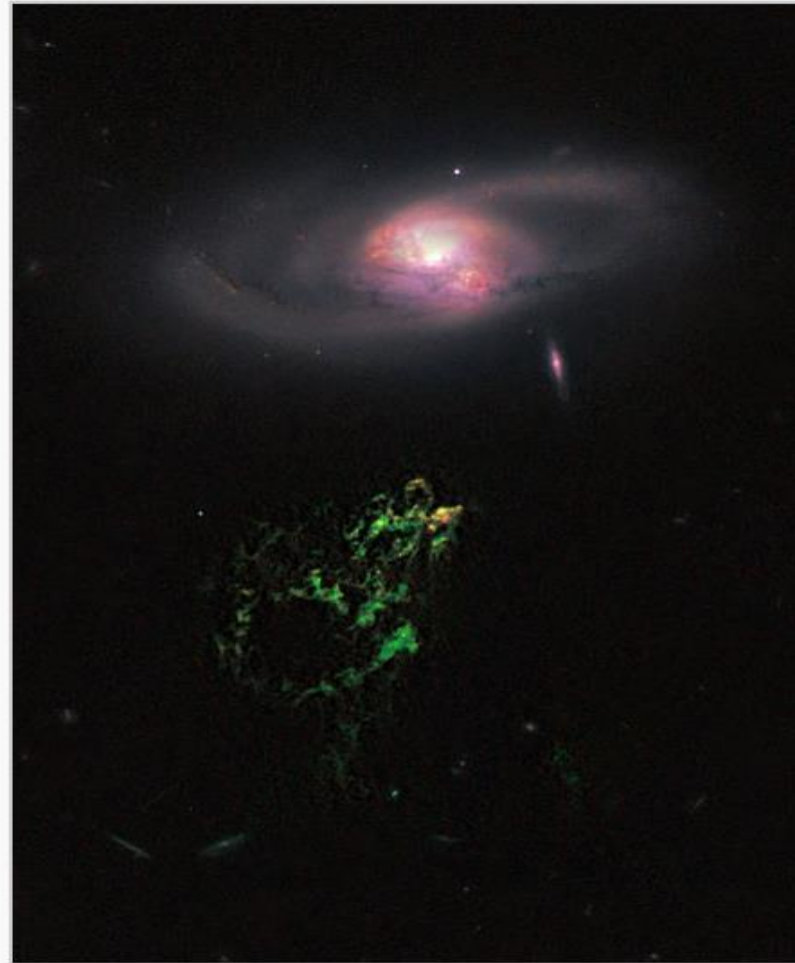
Fosters innovation, technical advances

Enhances public education, understanding of science

Basis for long term policy decisions

Chance for universities to profile themselves

Extend the relation to society



Hanny's Voorwerp (grünlich) und IC 2497 (Spiralgalaxie). Das Bild wurde von der WFC3 des **HST** aufgenommen. 

LERU paper on Citizen Science

**Purpose: Establish Citizen Science as accepted and high quality
scientific methodology at Universities**

First comprehensive document on citizen science at institutions

Addresses institutional concerns

Provides advice to scientists, their institutions and to political bodies

Daniel Wyler, Zürich, François Grey, Geneva, Oct 2016

Guidelines for scientists

- Recruitment and retention
- Quality and impact
- Learning and creativity
- Openness and Transparency
- Organization, Communication and Sustainability, participation
- Credits and Rewards
- Ethical and Legal Considerations

Recommendations for institutions

- Recognition of citizen science (*scientific/educational*)
- **Creating a single point of contact (*center, platform for Cit Sci*)**
- Raise awareness among researchers for quality projects
- Long term thinking, open science practice (repositories,..)
- Legal, ethical, privacy regulations in place
- Adapt and complement research evaluation, metrics
- Intensify contacts to society and policy making, promote access to platforms

Recommendations for policy makers

- Encourage evidence-based projects
- Develop guidelines for legal, ethical, commercial and privacy issues
- Encourage productive participation of citizens
- Encourage long-term collaboration between research institutions and non-governmental organizations

Recommendations for funding organizations

- Widen range of success criteria
- Adequate funding for community management, platforms
- Promote open science practices
- Set clear criteria for data privacy according to existing laws

Acknowledgement

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