Sharing initial concerns about arts, humanities and social sciences citizen science research projects

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1. My Knacksack

• Learning support in/lecturer at:

- Information and Communication Studies
 - Qualitative Research Methodologies
- Computer, Mutimedia and Telecom Studies
 - Design Methods and UX

Research projects:

- Open Access to Science (currently under Spanish government funding).
- Open Educational Practices and Resources (OLCOS project, EU 5th Framework).
- Cultural Objects in Networked Environments (COINE, EU 4th Framework).



2. Conducted research (I)

Research questions:

- Citizens only collecting and processing data?
- Is there AHSS citizen science projects?

Content Analisys:

- 4 platforms of citizen science (Wikipedia, SciStarter, CitSci and Precipita)
 - More than 800 projects
 - 4 studied variables:
 - Disciplines (sciencies/social sciences, art and humanities)
 - Task and phase on the research process
 - Design (bottom-up/top-down)
 - Aim (big data/not)

2. Conducted research (and II)

- Interviews:
 - Participants:
 - 5 innitiatives: national library, national film library, public libraries network, cartographic institue, Tapias Foundation (contemporary art musem).
 - Barcelona Lab's citizen Science Office and First CS Contest.

• Main questions about the...:

- Promoters:
 - On purpose or it became citizen science? Why this type of project: low cost/civic participation/...
- Volunteers:
 - Calls / rewards / needed competencies / do you keep contact data / Tasks/...
- Researchers:
 - Avaluation of outputs / Perceptions on quality of data / ...
- Process of participation:
 - Training of volunteers / Infrastructure / Verification processes / ...



3. Citizens as sensors

Exponentially growth on

- Devices which capture, produce and transmit data
- Sensors of smartphones
- Social network

Projects are fostered from top-bottom

- Volunteers participate in data collection phase
- Volunteers used for collecting large volume of data

Low cost mean for obtaining massive quantities of data

Hunter, J.; *et al.* (2013). "Assessing the quality and trustworthiness of citizen science data", *Concurrency and Computation: practice and experience*, 25: 454-466.







4. Citizen science's concept: restricted or free

Lewenstein, B. V. (2004) "What does citizen science accomplish?" <u>http://ecommons.library.cornell.edu/handle/1813/37362</u> Meanings of Citizen science:

- 1. Participation of nonscientist in the collection and analysis stages
- 2. Engagement of nonscientist in true decision-making

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3. Engament of research scientists in the democratic and policy process.

4. Citizen science's concept: restricted or free

• Decalogue of BCNLab Citizen Science Office :

Scientific research carried out, partially or completely, by non-professional scientists

- Creation of new knowledge.
- Participation in at least one stage.
- 4 levels of participation: crowdsourcing / Distributed intelligence / Participatory science / Collaborative science.
- Projects must obey a policy of open data and open code and must follow CC licences (when possible).

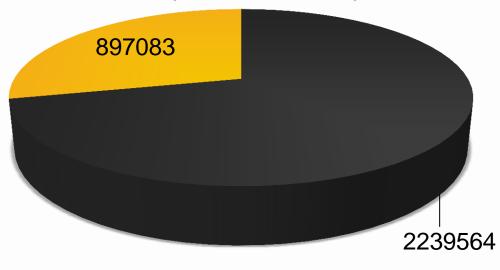
Decalogue of the	Any group wishing to belong to the	4. Participating research groups	search and Innovation (RRI) standards,
itizen Science	Office must assent to the following	must share and promote the following resources with the citizen science	promoted by the European Union, will be adhered to.
	points and be accepted by members of the Office:	community:	be adhered to.
Office of BCNLab	the onice.	conmonsy.	7. In sp far as possible, the projects
	1. Projects that will be accepted must	u. Volunteer census. Each group	must obey a policy of open data and
Citizen science is	involve the creation of new knowledge	must inform its volunteer scientists	open code and must follow Creative
understood to be scientific	with the active participation of citizens	that the project is part of the Citizen	Commons Ecenses.
research carried out.	in at least one stage of the research process. Valid projects under this fra-	Science Office and invite them to register on the census of volunteer	8. On the basis of a sustainable
partially or completely,	mework must consider citizens a vital	acientists on the Office's website. The	scientific activity, participating groups
by amateur or non-	part for the realisation of the proposed	census may be used to communicate	are committed to searching for com-
professional scientists.	research. In return and with the purpo-	the respective projects.	mon experimental platforms, be they
	se of providing a seal of quality to the		common tools (software and widgets)
	Office's projects, these will be posted	b. Visibility of the Office. On each	or experiments designed on the same
	on the website and included in the Office's catalogue, with a photo, a brief	project website the group will have the right and the obligation to include the	basis.
	description and a link to the project's	Citizen Science Office's logo. Therefo-	9. Participating groups undertake to
	website.	re each project can benefit from the	notify the other groups about the sta-
	/	seal of quality that belonging to the	tus of their projects and their interests
	2. The projects undertaken must	Office portrays and which at the same	on a bimonthly basis. The Office must
	comply with one of these four levels of	time contributes to disseminating its	notify, facilitate and share opportu-
	oitizen participation:	existence.	nities for new experiments with all of the participating groups. The aim is
	Level 1. Crowdsourcing.	c. Data resulting from the experi-	to create an environment of trust that
	Citizens ather or process data.	ments. Access plans and protocols	is collaborative and non-competitive.
		must be established that are practical	Meetings will be held every six months
	Level 2. Distributed intelligence.	and capable of creating a common re-	with all of the members of the Office to
	Citizens interpret data.	pository of open and accessible data.	promote networking and participatory
	Level 3. Participatory science.	d. Programming codes, The pro-	governance.
	Ctizens participate in the definition of	gramming codes must be accurately	10. Multidisciplinary practices will
	problems, challenges, objectives and in	documented (establishing plans and	be encouraged so that citizens can
	the collection of data.	protocols) in order to create a common	experiment with as many disciplines as
		repository.	possible, at least two, at the same time
	Level 4. Collaborative science.		endeavouring that the research has a
	Citizens design, together with scien- tists, the research to be carried out.	 All citizens participating in experi- ments and field work must be notified 	social and social-environmental impact and is capable of providing guidelines
	This research must have a direct	of the results of their research, prefe-	for public policies at a local and
	impact on the immediate environment	rably before anyone else. The Office will	national level.
	of the citizens and could motivate very	help to disseminate these results.	
	Repecific actions in the city.		
	/	The projects must combine strict	
	 The field of action must be in some way limited to within the Metropolitan 	research with communication actions integrated in the activity and do so pr-	
	Area of Barcelona.	ganically. The aim is to bring the results	
	The second second	and process of the research closer to	

http://issuu.com/bonlabcienciaciudadana/docs/llibret_icub_v.eng_/5



5. Hidden disciplines

Research and innovation internal investment in Higher Education Spanish Institutions (in thousands of €)



Sciences and Engineering 70%Social Sciences and Humanities 30%

Source: INE, 2013.

5. Hidden disciplines

There is potential for Citizen Social Science

 PURDAM, K (2014). "Citizen social science and citizen data? Methodological and ethical challenges for social research". *Current Sociology* (62), pp.374-392.

Unbalanced proportion of physical and natural projects in relation to art, humanities and social sciences (AHSS)

- Wikipedia: list of 81 projects. Only 1 is about linguistics.
- SciStarter: 23 categories. Only 2 categories on AHSS: archeology and education.

6. Tip of the iceberg

- The label "citizen science" (CS) is still unknown and unclear.
- CS is not the main aim but to strength the link adm-citizens / heritage / low cost data...
- Technology is not an issue. Need for coaching on:
 - How to involve citizens / problem definition / design projects...
 - Ethical issues
- Inspiration in previous initiatives when designing new CS projects.
- No worries on validity of the data. Absence of prank data.
- Need for volunteer leaders despite the bottom-up design.
- Need for deepen engagement. Not only gathering and processing data's tasks.
- Importance of keeping participants' data.
 They are willing to participate in new scientific adventures!

7. Appealing for further research

- Increasing variety: topics, types.
- Barely scratch the surface with current mobile technology or Internet of Things.
- Convergence with other movements:
 - Open source / data / content...
 - Civic participation / Activism...
 - Do It Yourself
- Links with education and training.
- Becoming mainstream: easier to publish in indexed journals.



Thanks for your attention! Looking forward to your comments

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