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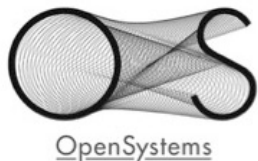
14.–15.10.2020

Knowledge for Change: A decade
of Citizen Science (2020–2030)
in support of the Sustainable
Development Goals

Enhancing social dimensions in citizen science: SDGs and social tipping points

Josep Perelló, OpenSystems, Universitat de Barcelona

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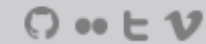
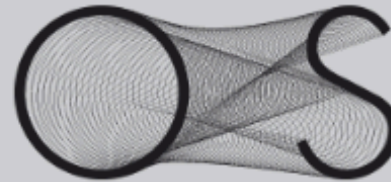
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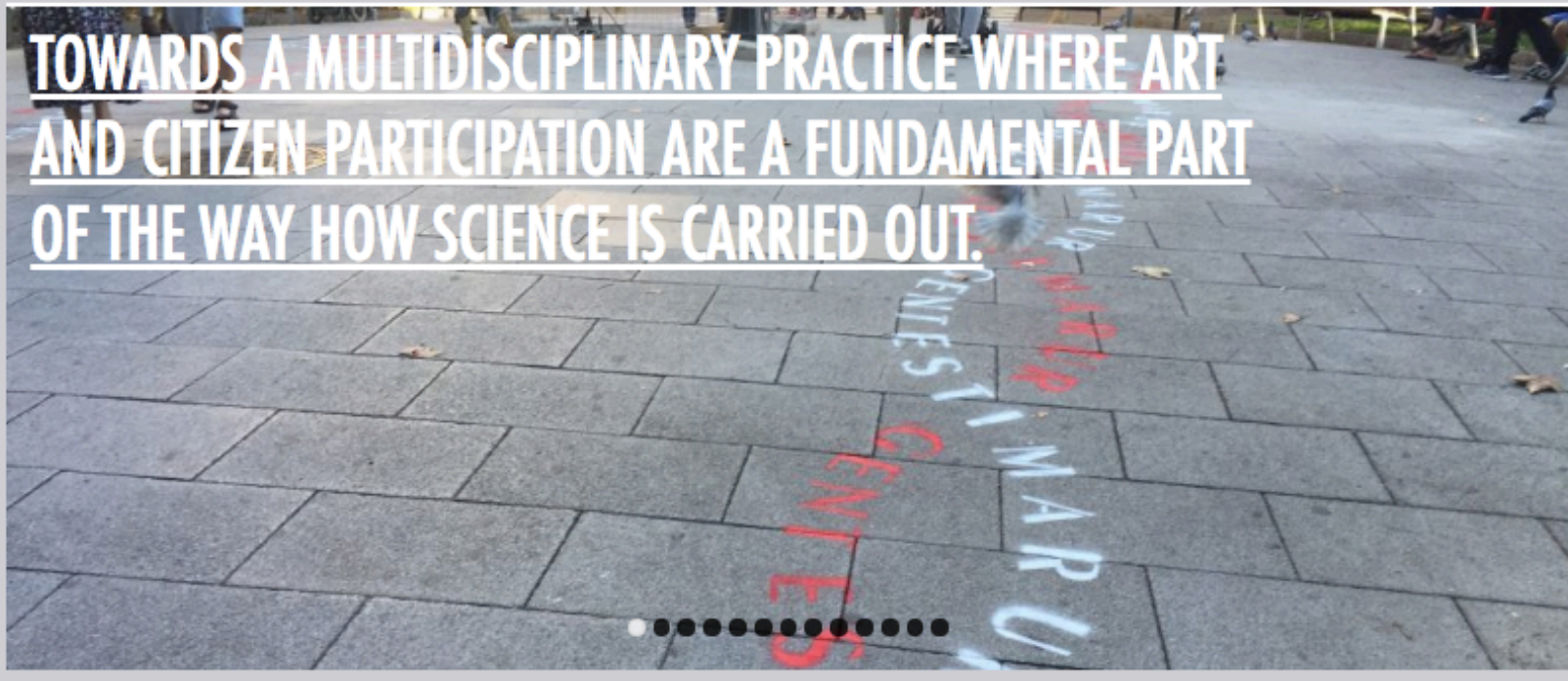
Outline of the talk

- What can be the role(s) of CS in a research oriented to SDGs?
- Can we imagine CS practices as social tipping point interventions?
- How to enhance social dimensions in CS to respond to SDGs?





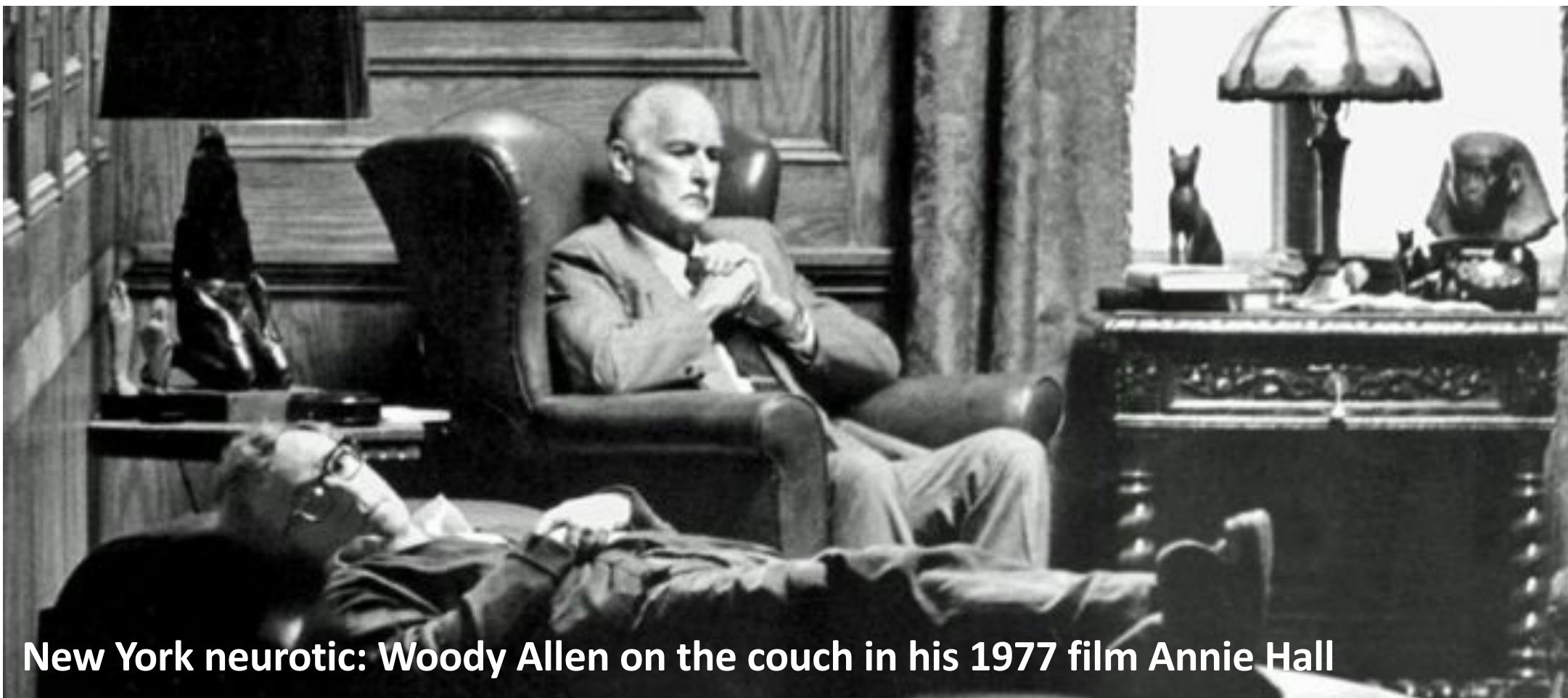
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Enhancing social dimensions in citizen science: SDGs and social tipping points

J. Perelló | OpenSystems, Universitat de Barcelona

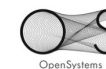
Scientists on the couch: Citizen science practitioners



New York neurotic: Woody Allen on the couch in his 1977 film Annie Hall

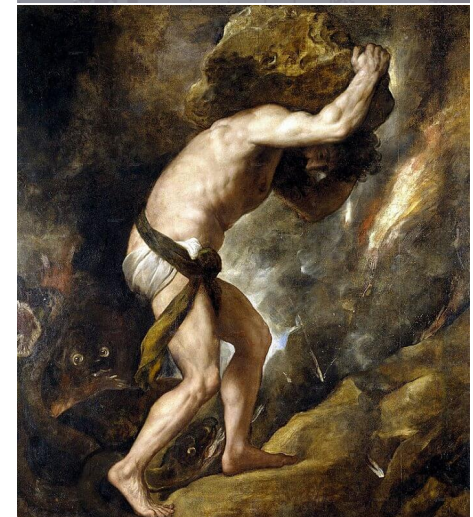
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Ambitions

- SDGs: “universal goals that meet the urgent environmental, political and economic challenges facing our world.”
- Citizen science: “assists the needs and concerns of citizens” A. Irwin / “Citizens can produce reliable scientific knowledge”

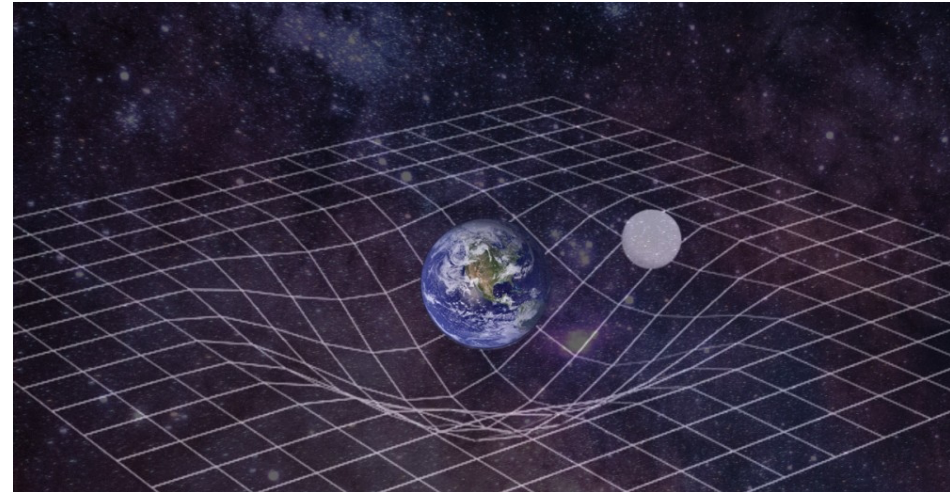


Sisyphus, 1548. Titian. Credit: titian.com

Enhancing social dimensions



- › Social: relating to society and living together.
- › Social dimensions: Concern for the values, norms, rules.



Enhancing social dimensions



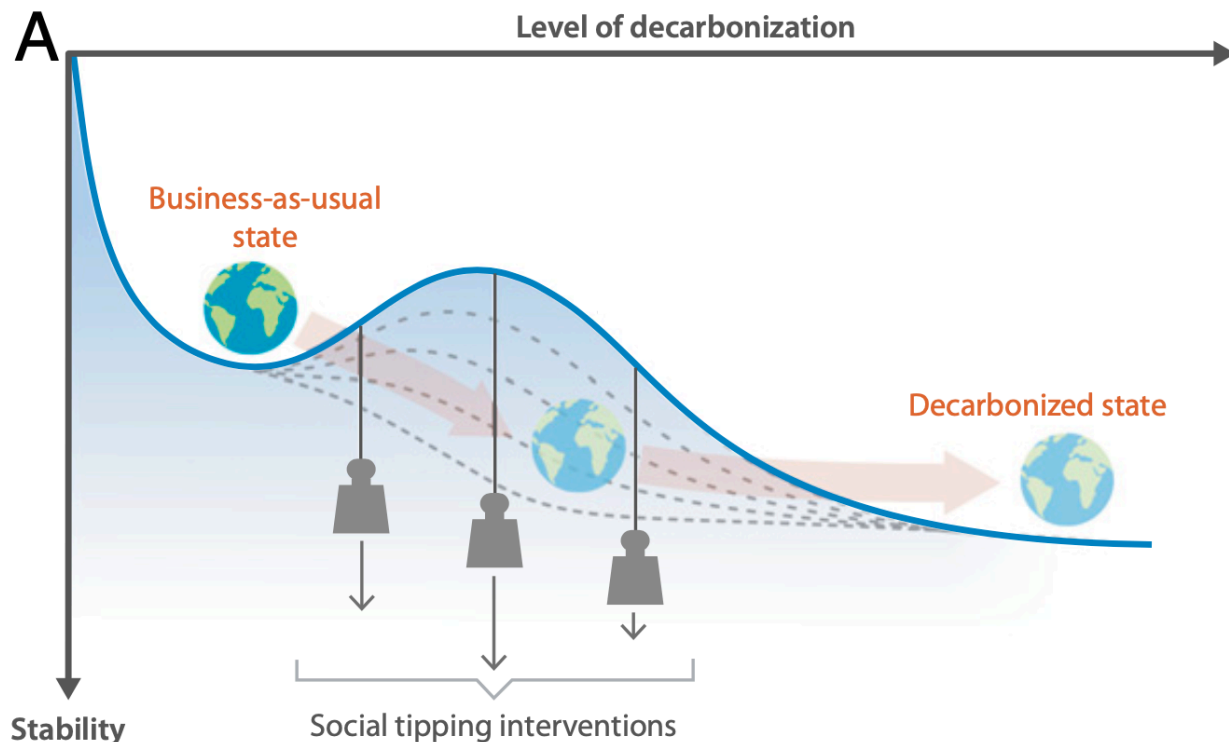
Collaboration is the answer, but what is the question?

› Hans Ulrich Obrist, art curator and director of international projects at the Serpentine Gallery, London.



Estació Ciutat – Participatory project to promote environmental Health. OpenSystems, joint work with Natalie Jeremijenko. Centre de Cultura Contemporània de Barcelona, 2017.

Social tipping points



Social tipping points, at which a small change can trigger rapid and large changes.

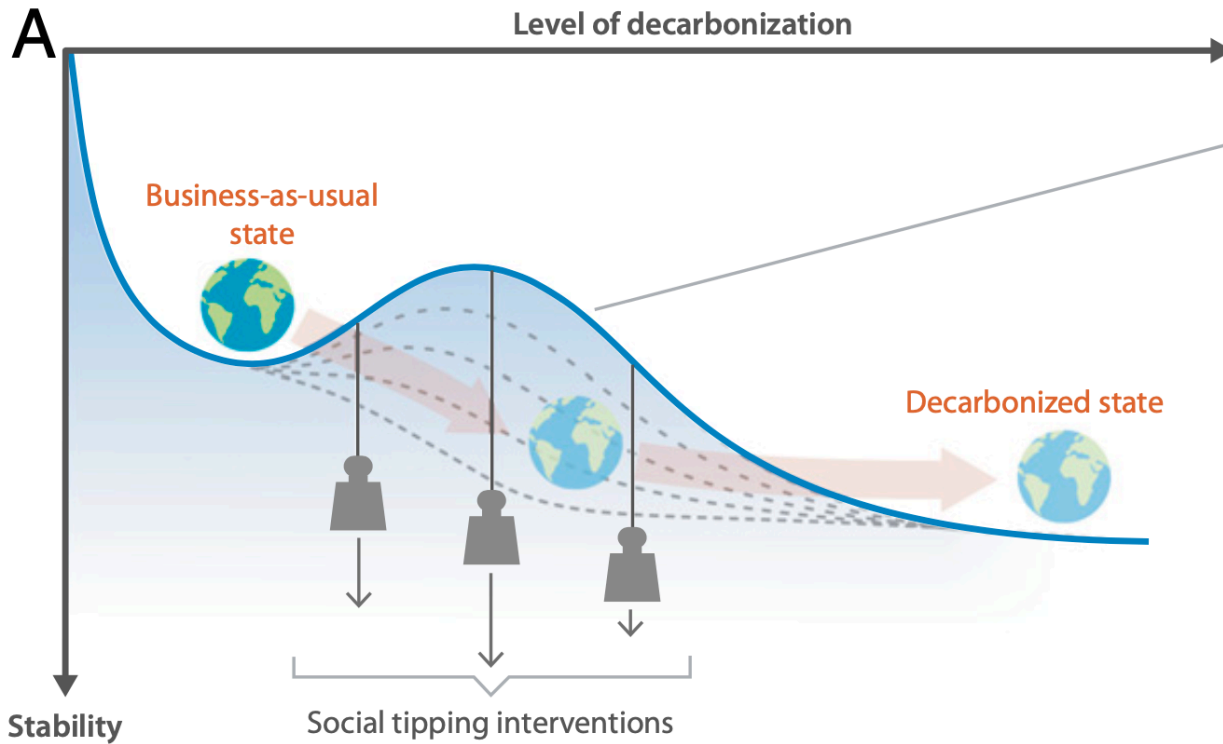
Self-reinforcing positive-feedback mechanisms, that inevitably lead to a qualitatively different state.

Otto, Ilona M., et al. "Social tipping dynamics for stabilizing Earth's climate by 2050." *Proceedings of the National Academy of Sciences* 117.5 (2020): 2354-2365.

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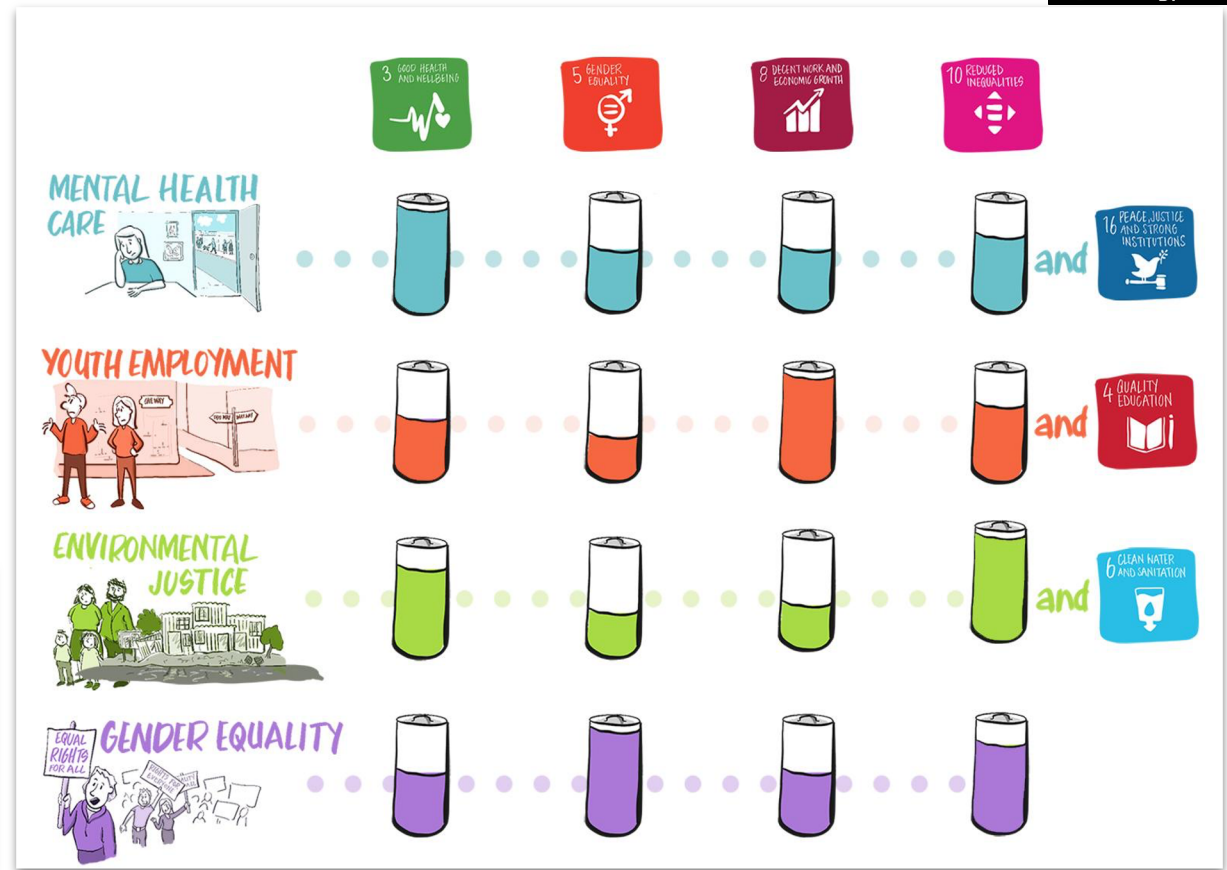
Social tipping points



Can citizen (social) science practices/projects be understood as social tipping interventions?



 The CoAct project has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No. 873048



CoAct: Codesigning citizen social science for collective action (2020-2022)

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Codesigning citizen social science for collective action

- > CSS understood as... participatory research co-designed and directly driven by citizen groups sharing a social concern.

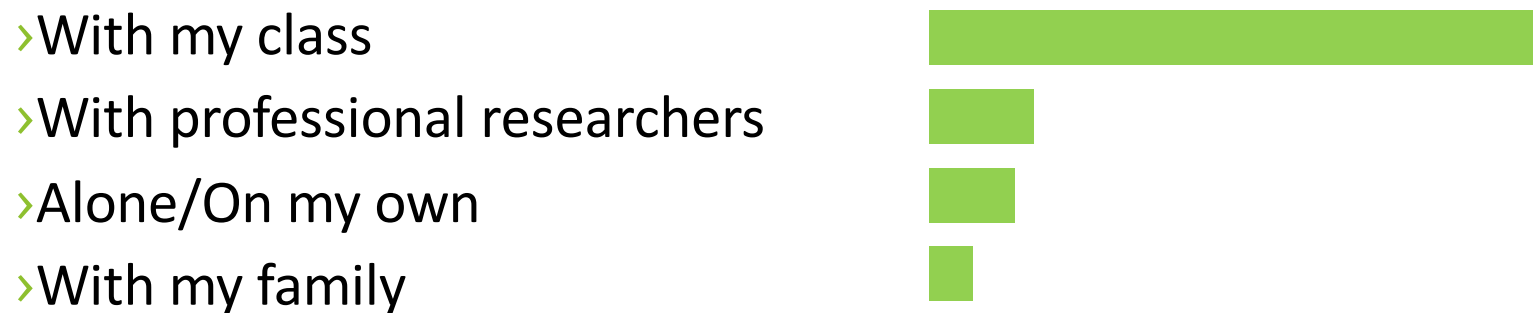


To Secondary school students: With who would you like to participate in the next citizen science project?

- ›With my class
- ›With professional researchers
- ›Alone/On my own
- ›With my family

Source: Ciència Ciutadana: Educació I Recerca, a les escoles 2016-Recercaixa

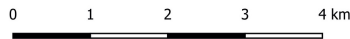
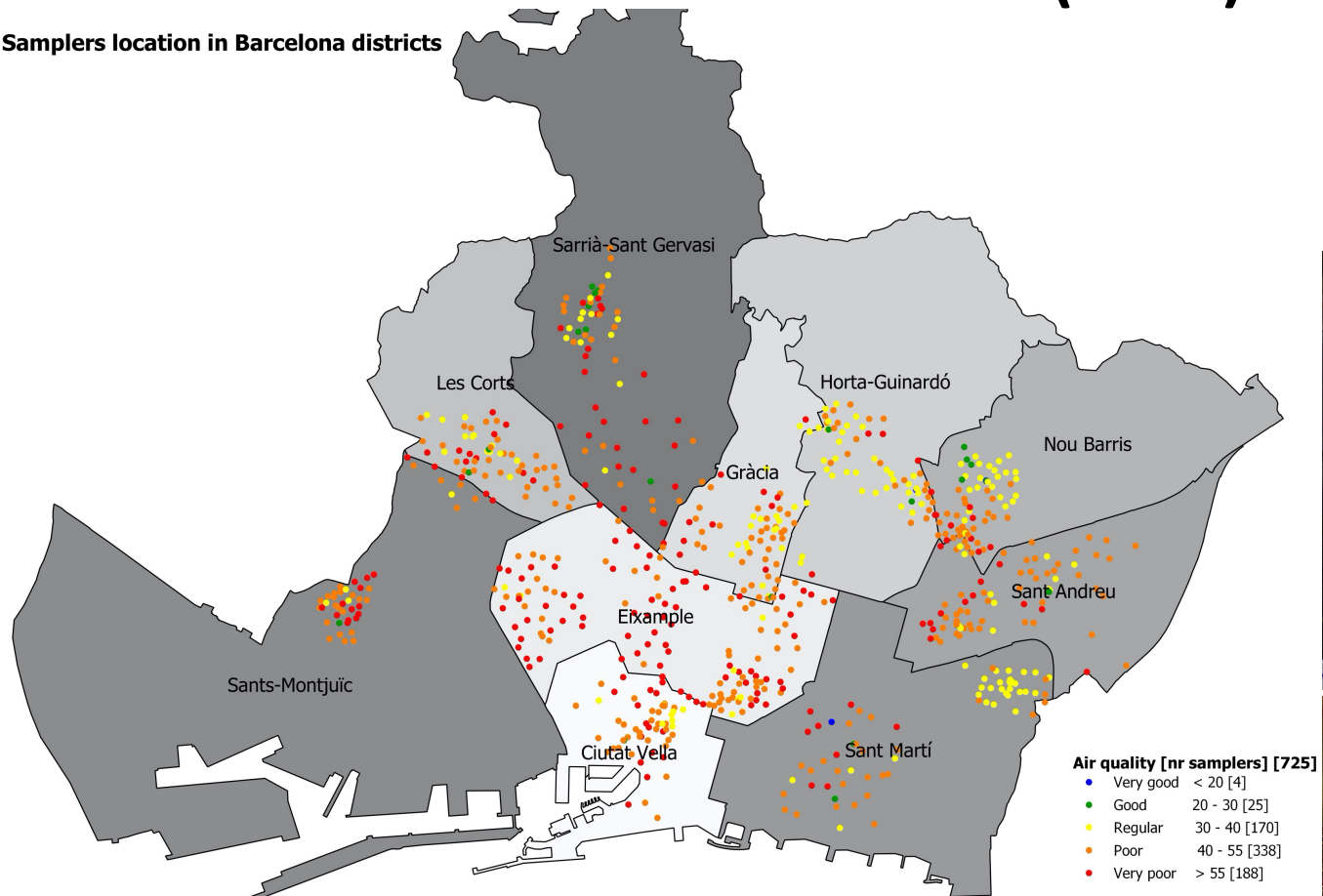
To Secondary school students: With who would you like to participate in the next citizen science project?



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xAire: NO2 concentration levels (2018)

Samplers location in Barcelona districts



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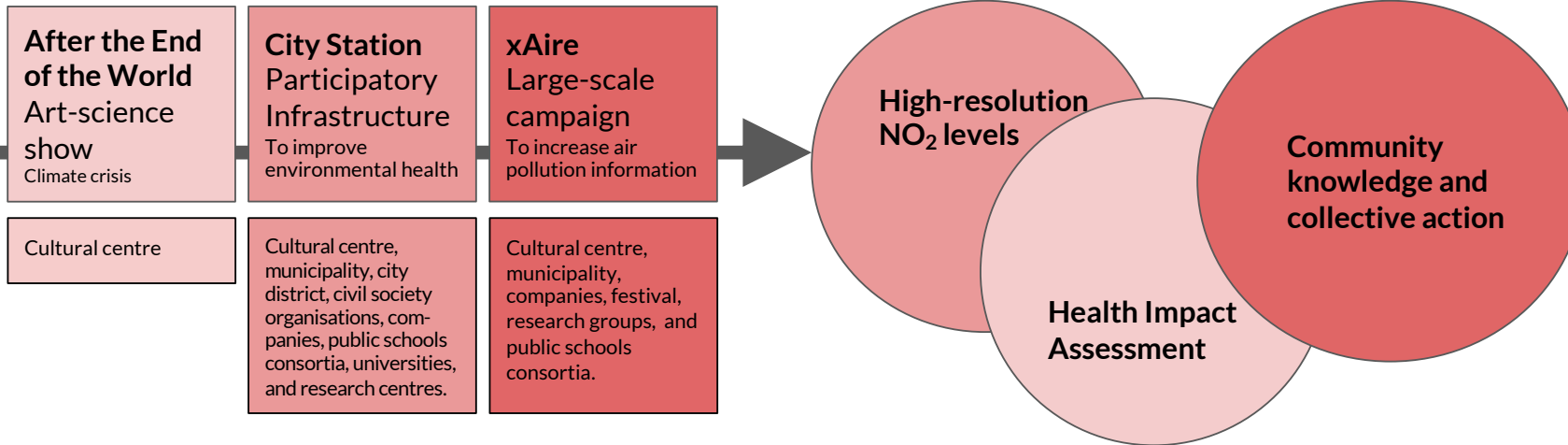


xAire: NO2 concentration levels (2018)

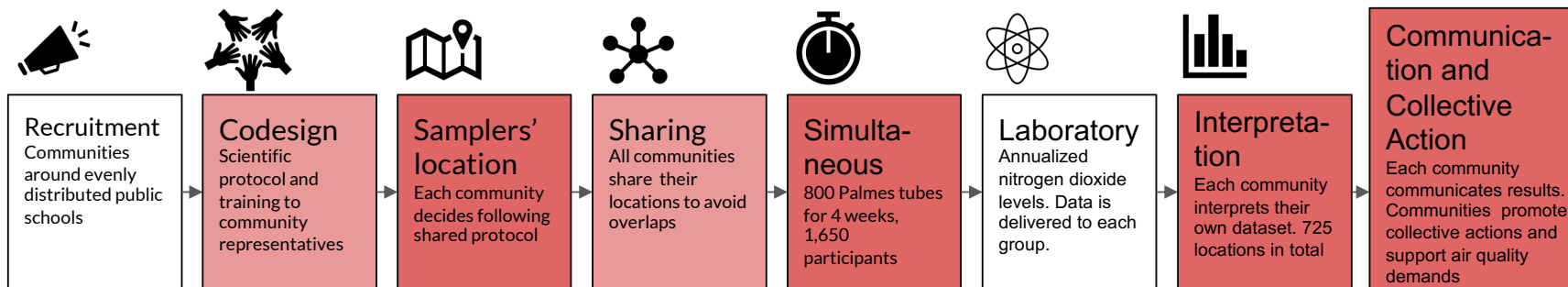


Context and inception

Large-scale citizen science campaign outputs



Participatory research process

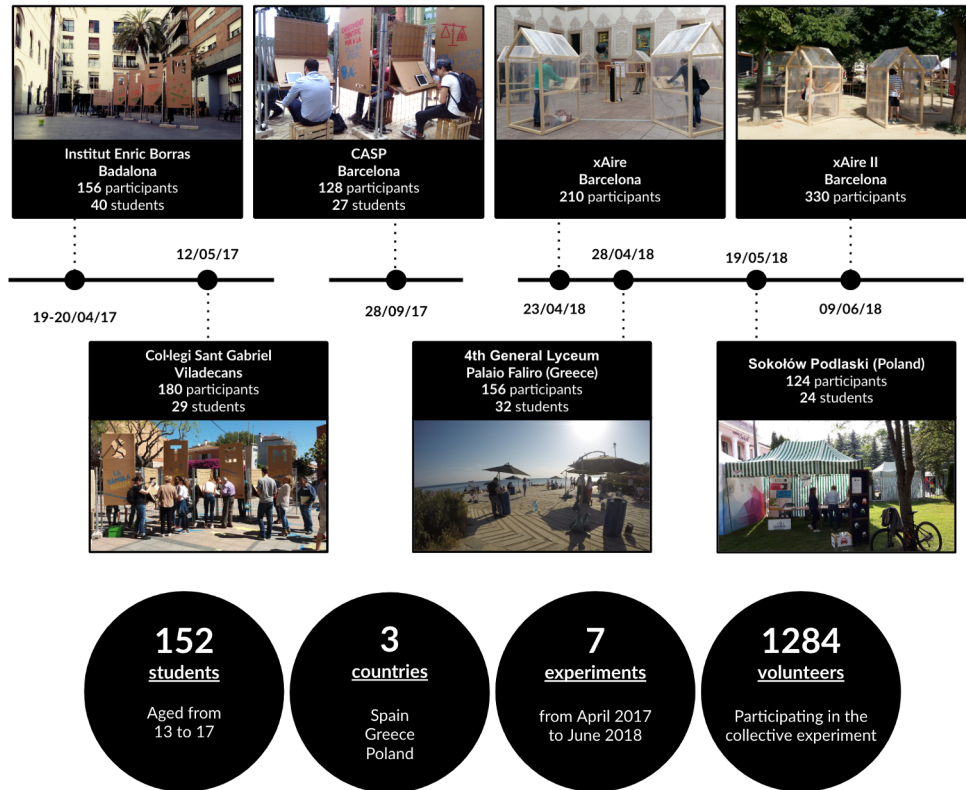


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Public experiments



Outputs from StemForYouth EU Swafs projects: Introducing CS at schools

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UrGentEstimar públic experiment: Social Cohesion

*“We suggest that art-science can act not so much as a way of assembling a public for science, but as a **públic experiment.**”* Born and Barry (2010)

Opening a street arts festival as a place for citizen science.

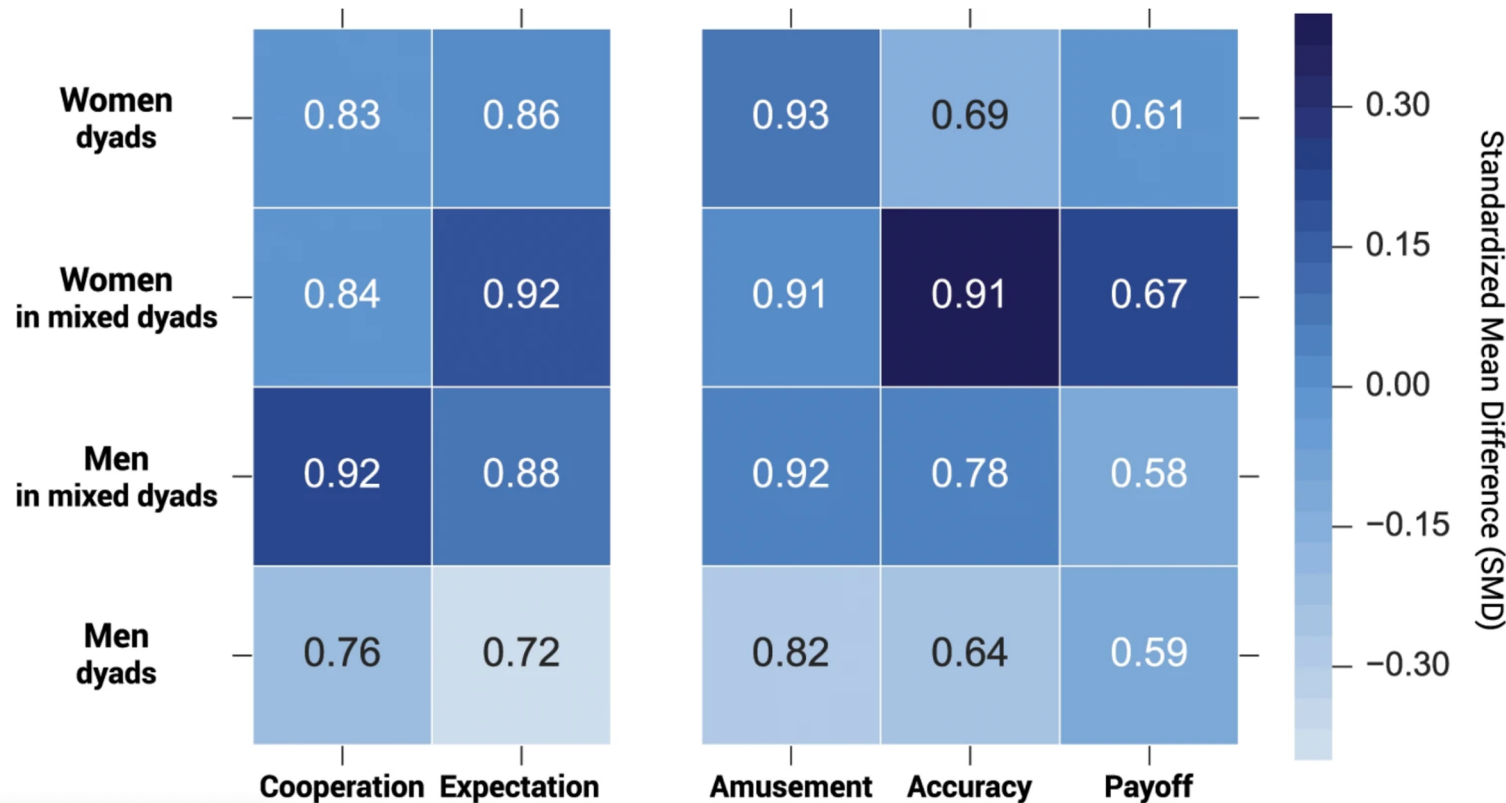


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UrGentEstimar: Social cohesion



Behavioural domains by gender pairing. *Cooperation* refers to the ratio of cooperative decisions; *Expectation* refers to the ratio of positive expectations regarding the partner's behaviour, namely cooperation; *Amusement* refers to the ratio of positive arousal following eye contact; *Accuracy* refers to the ratio of correct guesses regarding the partner's behaviour; *Payoff* refers to the average payoff. The number in each cell shows the normalised value; the colour represents the standardised mean difference, calculated as the difference in means between groups for each behavioural domain divided by the standard deviation of each behavioural domain.

Anna, C., Julián, V., & Josep, P. (2020). Gender-based pairings influence cooperative expectations and behaviours. *Scientific Reports*, 10(1).



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*In a word: the best is experience. I will not say that the experience is not obtained in the constant treatment with a **library**, but above the library the experience prevails.*

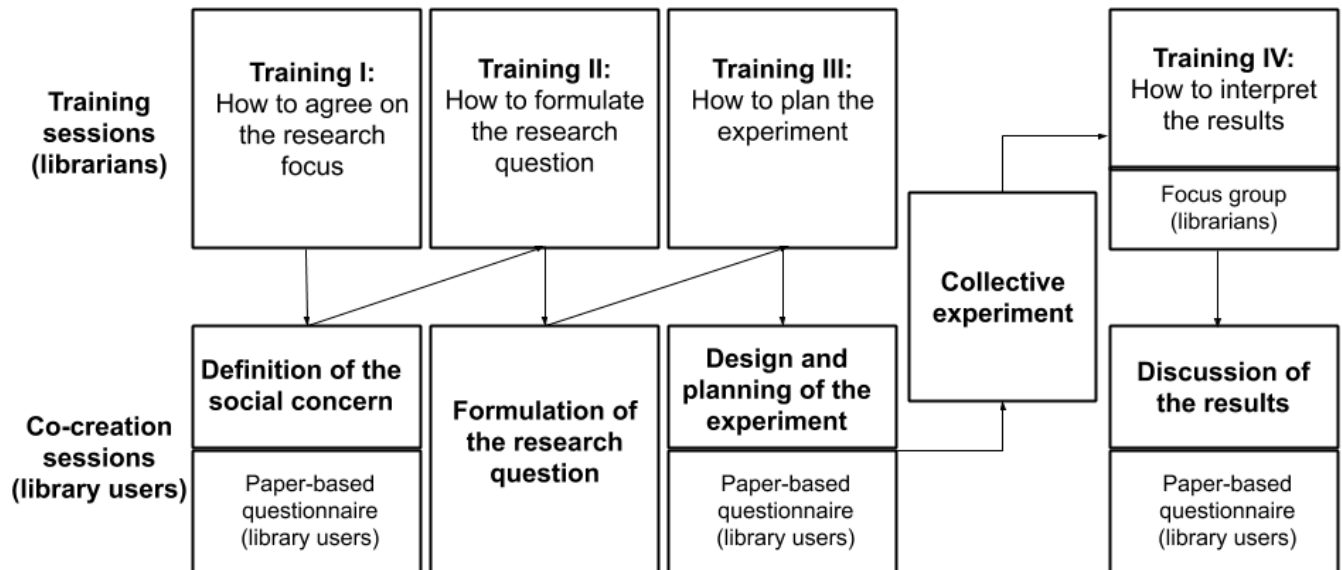
Roberto Bolaño, 2666

Libraries as community hubs



 3 Facilitators (Researchers)
7 Librarians
4 Libraries in 3 cities
40 Library Users

 4 Trainers
30 Librarians
24 Libraries
+10 hours of Capacitation



Cigarini, A., Bonhoure, I., Vicens, J., & Perelló, J. (2020, September 11). Public libraries embrace citizen science: strengths and challenges. <https://doi.org/10.31235/osf.io/2aq6n>

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Libraries as community hubs



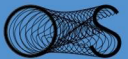
Cocreated publication:

<https://zenodo.org/record/3490610#.XqGc1xMzafU>

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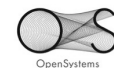


Public experiments on housing price regulations



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Enhancing social dimensions



Collaboration is the answer, but what is the question?

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Estació Ciutat – Participatory project to promote environmental Health. OpenSystems, joint work with Natalie Jeremijenko. Centre de Cultura Contemporània de Barcelona, 2017.

Enhancing social dimensions



Participation is the answer, but what is the question?



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Enhancing social dimensions

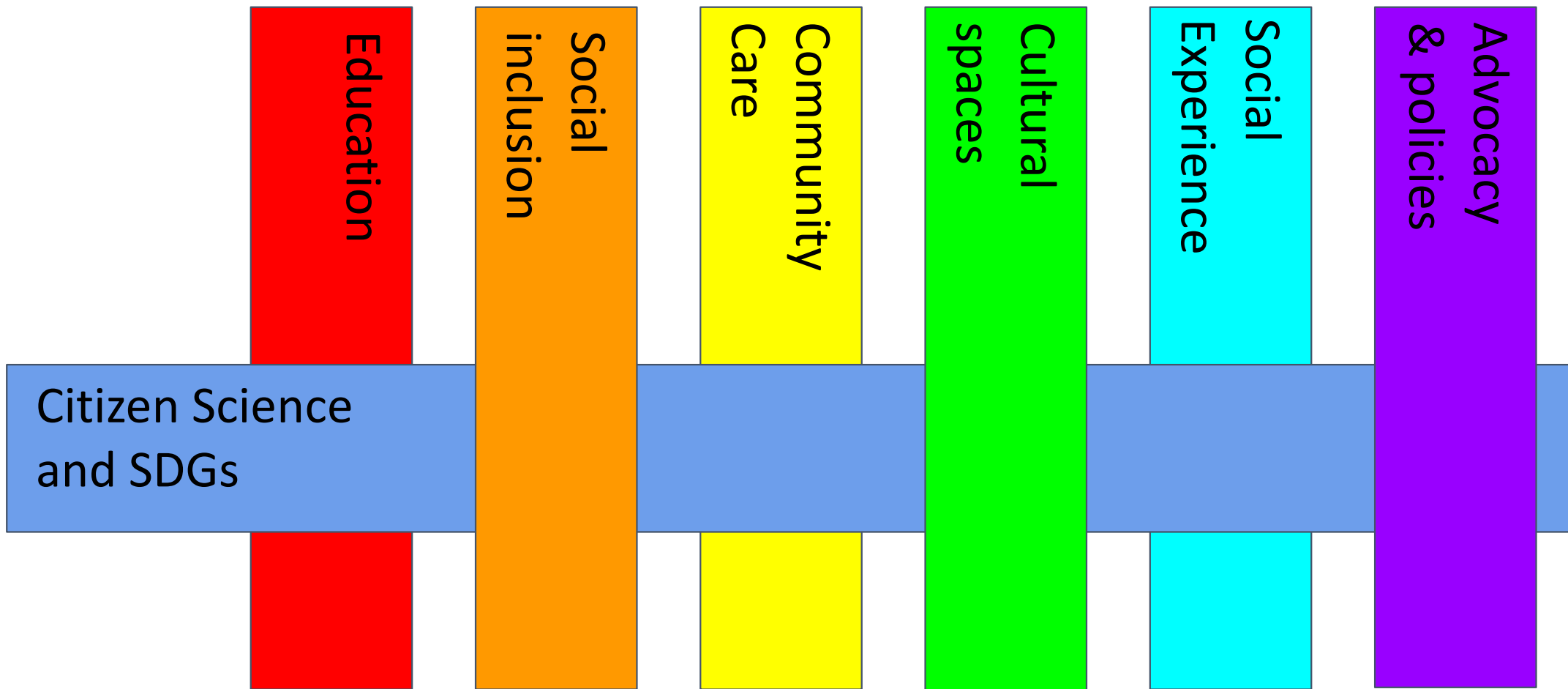


*Cooperation is the answer,
but what is the question?*



Estació Ciutat – Participatory project to promote environmental Health. OpenSystems, joint work with Natalie Jeremijenko. Centre de Cultura Contemporània de Barcelona, 2017.

Final remarks



Thank you!!



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@opensystemsUB
@josperello



Vimeo
channel



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