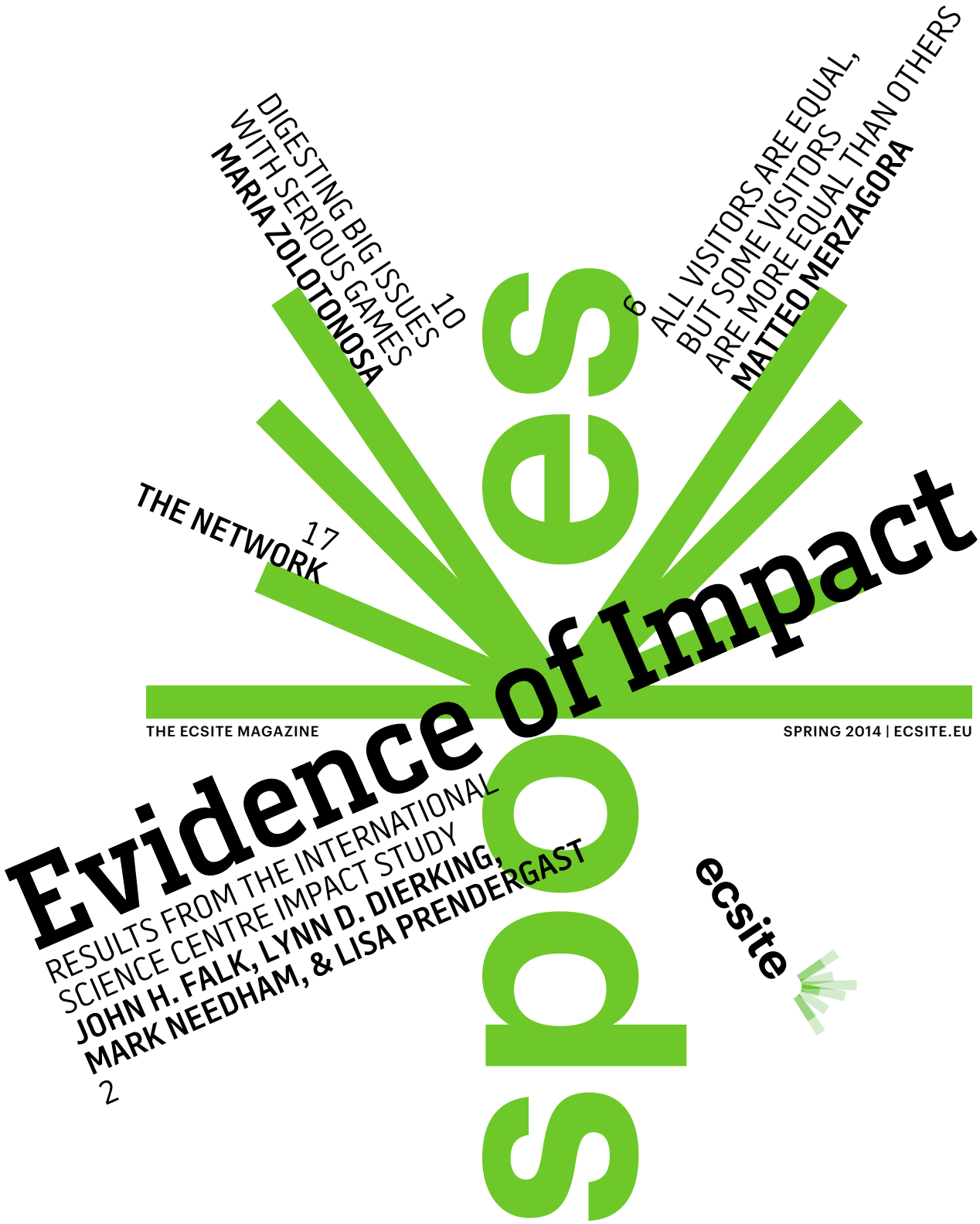

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JOHN H. FALK,
LYNN D. DIERKING,
MARK NEEDHAM &
LISA PRENDERGAST

MATTEO MERZAGORA
MARIA ZOLOTONOSA
THE NETWORK

Nottingham, UK:
Students sharpen their science skills at 3-2-1-Ignition*, a science pop up shop located in a mall.
The shop was a Pilot Activity within the PLACES project.

All visitors are equal, but some visitors are more equal than others

MATTEO MERZAGORA
TRACES-ESPGG, PARIS, FRANCE

Science is not the same everywhere.
Science is not the same for everyone.
What is not universal
nor objective is the meaning of science
for the people who encounter it.
And at the hearth of the science centres'
activity there is not science, but the
encounter of visitors with what they
perceive as science.

Science is a noble form of knowledge and can be a wonderful way to produce changes in the world and in people's lives, but we should not forget that for a lot of people 'science' is essentially the main instrument by which they were defined as bad students during their school years, thus determining their progression in higher education, thus determining their social status, unless other socially determined factors (family, cultural environment) help correct the trajectory. Of course this is not a good definition of science. But it is not a misperception either. It is a reality. And the problem is that differences in the perception of science are not equally distributed socially. In high socioeconomic environments, 'science' is mainly an opportunity of success; in low socioeconomic environments, 'science' is mainly an instrument of differentiation and selection (warning of simplification: socioeconomic statuses are extremely complex and articulated, and we should always be careful not to trivialize them...). Are science centres capable of playing a role in counteracting this tendency? Are we successful in democratizing the access to scientific knowledge and its impacts?

According to Emily Dawson, who studies social inclusion in science centres at King's College London, "The challenges of social exclusion/inclusion are not new. Yet to date, despite many thousands of 'interventions', science centres and museums are still visited by a socially narrow 'public'. We must think critically about why and how social exclusion happens and why it is so resilient."

Her conclusion is somewhat pessimistic. But there is a positive element: today we are thinking critically. Good signs are, for example, the choice to devote to "Science communication for social inclusion and political engagement" the 2014 conference of the Public Communication of Science and Technology (PCST) network, the attention to social inclusion in the PLACES Local Action Plans (www.openplaces.eu) or the founding within FP7 of projects spanning science in society and the social inclusion agendas, such as SiS-Catalyst. Looking back at programmes of past Ecsite Annual Conferences gives a clear feeling of an emerging trend: social inclusion was an absent topic in 2007, but starting from 2012 - equity & inclusion (EI) becomes a keyword category in the sessions. In 2014 at least seven sessions are directly devoted to social inclusion.

The annual conference is an excellent observable, so let's give it a closer look.

In the past, social inclusion was mainly focusing on visitors with disabilities, or on gender issues. Inclusion of people from low socioeconomic backgrounds usually comes through specific programmes such as "bringing science to risky audiences", to quote the title of the 2010 Ecsite session on science activities with prisoners and small crimes committers, chaired by Giulia de Martini and involving Guglielmo Maglio, Barbara Streicher, Demitra Lelingu.

In 2009, together with Paola Rodari, Sally Duensing and Melissa Gilmore, we organised a session on the role of explainers in facing social diversities ("Face(s) to face diversities"). In 2010, Justin Dillon and Emily Dawson presented a session entitled, "Science to all: bringing in 'hard to reach' communities" (with Sue Cavell and Flora Paparou). One element begins to emerge: Reflections on inclusion should not just concern special programmes, but also our day-to-day activities. This becomes the focus of another interactive session in 2012 - "Challenges and

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opportunities of social inclusion", with Andrea Bandelli, Emily Dawson and Holly Hasted.
Framing social inclusion not only as a problem, but also as an opportunity is another important step forward. Asked to comment on the outcome of the 2012 session, Holly stresses that "an important first step is to reflect on moments in our own lives where we enjoyed privileges - either by virtue of personal attributes (such as gender or intellectual aptitude) or circumstance (such as social class at birth) - that were completely beyond our control. Only then can we acknowledge the randomness of exclusion and the urgency of inclusion."

This element of self-reflection was also at the core of a session that Jan Riise, Claire Ribrault and myself presented in 2013: "Science centres and social inclusion: are we really on the right track?", in which we stimulated a reflection on the fact that if science centres are undoubtedly part of the solution, it does not mean they are not also part of the problem by unintentionally reinforcing mechanisms of exclusion through the way they define science, by the design of their exhibitions, by the nature of their programmes, etc. The need of "Searching for innovative paths in social inclusion" was confirmed in another 2013 session with Gérard Cobut, Nathalie Caplet, and Katherin Unterleitner, who introduced the wonderful project of pop-up "knowledge rooms" in abandoned shops in the underprivileged areas of Vienna.

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One element seems to accompany those reflections: misrepresenting the visitors and not allowing them a voice are among the main factors that generate unintentional exclusion mechanisms. A simple, personal story can illustrate this. At Espace des sciences, Pierre-Gilles de Gennes hosted a few sessions of the INPROFOOD project, in which teenagers discussed food and health issues through a PlayDecide activity (for more on this, read "Digesting big issues with serious games" by Maria Zolotonosa, also in this issue of *Spokes*). We ran some sessions with groups drawn from underprivileged areas in the northern suburbs of Paris. At one moment, two groups of teenagers got upset: One of the cards suggested obesity affects particular teenagers from underprivileged milieux. That is: them. But none of them, and very few of the people living in their community, were overweight: A temporary loss of trust resulted, as the teens perceived that the knowledge presented by science did not match their direct knowledge (the youth were mainly of south-Mediterranean origin, observing a quite healthy food tradition). Luckily, a discussion-based activity such as PlayDecide allowed them to express their feelings, and we agreed to suggest that the game's authors revise that particular card. But how would they have felt if, as in an exhibition, no space was available to express their opinions and nobody was there to listen? That presentation of science, by misrepresenting and not listening to their objections, would have reinforced the mechanisms of exclusion from knowledge-based activities and careers of which they are already victims. Together with specific programmes devoted to reaching difficult audiences, removing unintentional exclusion mechanisms from our offer appears to be a key challenge in the evolution of science centres.
Looking at this year's Ecsite Annual Conference programme, the feeling is that — thanks to the people mentioned above, and many more — we are indeed on the right track. Social inclusion will be treated in THE Group (training explainers to facilitate social inclusion) Pre-Conference Workshop at the Ecsite Annual Conference 2014 in The Hague, Netherlands, and in at least six other sessions:

- Explainers and social inclusion
- Science centres and museums: Inclusiveness for social change
- From liquid nitrogen to social inclusion: The evolving identity of science events
- Towards a 'competent rebellion': Social inclusion and innovation in science communication
- Science centres unplugged: The pop-up experience
- Unusual suspects: Bringing science engagement to marginalized groups.

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Teenagers debate
during a PlayDecide discussion
game in Paris, France.

Visitors and architects design
the city of the future,
The Hague, the netherlands.