

Raconte-moi tes technologies: science communication
to foster intergenerational dialogue

Céline Martineau

Les Atomes Crochus

celine.martineau@atomes-crochus.org

Vanessa Mignan

TRACES

vanessa.mignan@groupe-traces.fr

Matteo Merzagora

TRACES and Les Atomes Crochus

matteo@merzagora.net

Abstract

At the interface between science communication and social engagement, the project *Raconte moi tes technologies* (Tell me about your technologies) is designed to engage young and elderly audiences in a dialogue around technological objects, mixing personal memories and technical information. The project was created and is currently run in France by the association *Les Atomes Crochus*, and consists in “one shot” activities, longer term workshops, small exhibitions and “participatory museums”, and a training program. All activities involve groups mixing young teenagers and elderly people.

In the activities, a technological object, ancient or modern (a floppy disk, a Wii remote control, a coffee grinder etc.), is used to spark a discussion facilitated by a mediator through a strong but open scenario. Each generation has a specific experience related to those objects, and through them a form of scientific culture. This culture is often implicit and devalued but can be a powerful, natural vehicle to share and learn. By forging a

supportive link between generations through dialogue, the project aims to fight against senior isolation and help children develop their awareness on technological evolution. We are currently analysing all sessions to understand the reaction of the participants to this non-standard approach to technical and scientific knowledge. Preliminary results indicate that the fact of mixing personal memories and experiences with scientific and technical information have a very positive effect on both the enjoyment and the learning process.

From science communication to social link

Tell me about your technologies (*Raconte moi tes technologies*: www.tes-techniques.fr) is a series of activities created by the association *Les Atomes Crochus* (www.atomes-crochus.fr) in Paris. It aims at fostering intergenerational dialogue through the exchange of both expert and personal knowledge about technological objects; and symmetrically, it aims at developing a scientific and technological culture starting from a dialogue among elderly and younger people. We believe that the combination of these two specular pathways can have profound innovative effects in the science communication and social inclusion domains.

The first idea of the project actually sparked when observing the lack of organised interaction among grand parents and grand children on Wednesday afternoons in science and technology museums. On Wednesday, children do not go to school in France, and they often spend time with their grand parents. Yet, most of the activity proposed tend to address only children, or in any case do not favour a dialogue among the two generations. It is a pity. First of all, because it is clear that the strengthening of family ties is one of the main reasons why the public visit museums, making the visit a social experience. Secondly, because education studies clearly show that horizontal sharing of knowledge have a great impact on learning and sense-making. But also because, as stated by the astrophysicist Hubert Reeves, “in a society in which the family sphere is more and more unstable and on the move, grand-parents remain, for children, a solid anchor on which they can rely for learning”. In fact, in western civilization we have developed a tendency to split ages, creating what can be defined as “age ghettos”. Intergenerational projects can on the contrary favour the establishment of social links.

Aging: from a problem to an opportunity

The idea of “intergenerational” has emerged from the issue of aging in Europe. The related projects and actions were therefore often built based on the underlying idea of having to fight aging, perceived as a purely negative phenomenon. This type of vision is called “ageism”. Little by little, this vision has evolved towards a more dynamic and positive way of thinking about the aging of the population, and the projects have then focused more on the wealth that transmission and learning between all ages represents for society, and for the education field in particular. The *Tell me about your technologies* project address these topics by allowing younger and older people to pass on their knowledge, and in doing so, to gain awareness of the value of the knowledge that they hold. Participants then get a taste of the pleasure of transmitting and of the enthusiasm and motivation that drive learning. This realisation goes both ways, involving youngsters and elderlies at the same level: in fact, in all phases of the activities, they are all at the same time teachers and learners, owner of a specific knowledge or discoverer of a new world. As stated by 74-year-old Madelaine, after a workshop at a Senior Club involving 12 elderly and 10 youngsters: "It was a very pleasant moment of sharing with children. We taught them things, they taught us other things. This made me feel closer to my grand-children who are far away”.

From the expression of the public to collective memory.

In proposing intergenerational workshops around technological objects, past or present, *Tell me about your technologies* values each person’s knowledge. The project hence aims at sharing the collective memory to better enjoy living together. As such, the project is truly at the crossroads of scientific culture and community work.

Recent or old technological objects are part of our lives, so each one of us owns a piece of knowledge related to science and technology. This knowledge, often implicit and subjected to self-inhibition, is a natural vector for sharing. Exploring the history of technologies is indeed a way to discover the world: each person according to its age, each person holding a little piece of a global knowledge.

If seniors need to better understand current technologies, they are also witnesses of an incarnate history that can help young people to grow. Young people, on their side,

are enthusiast when they are given the chance to explain their own world, instead of being always seen as just learners: their knowledge is valued, and at the same time they can contextualize it by combining it with the stories and experiences of the elderly. By offering meetings that build a strong bond between generations, the projects intends to fight social isolation of seniors and help juniors to put their knowledge into perspective.

Tell me about your technology develops 3 main activities.

The first are short workshops to meet and discover technologies and the other participants. In groups of about 15 people, participants explore a series of more or less known objects from different epochs on a specific theme (games, sound and image, gardening, daily life etc.). These objects become the trigger for rich an intense exchange among generations: dialogues - which are lightly oriented by a facilitator - cover at the same time the functioning of the object, its history, and the personal relationship that different generations have with it. We all have rich personal stories to tell about a floppy disk, a typewriter, a Wii remote control, or a coffee grinder... These stories are not the same for different generations, and the encounter among them is the real heart of the activities.

A second format consists in longer workshops (*stage*) that link intergenerational exchanges with a collective production of a creative artefact. Participants of different ages develop a longer, more in-depth encounter. These exchanges have as a final outcome the collective production of a photo exhibition, a video, a show, or an action in the public space.

A third component, currently under development, concerns a training scheme for facilitators, explainers and teachers about the spirit of the project, the methodology of the workshops, and the best way to combine engagement in science and intergenerational exchange.

A poster exhibition, simple but effective, has been produced to provide a sort of scene for some of the workshops, providing a light background stimulus to the conversations. The website of the project presents an overview of the collective productions realised within the project as well as short films, anecdotes, and descriptions of the institutions and venues hosting the workshops.

Tell me about your technologies was created in 2011 and started being implemented in 2012. In 2 years, it involved 41 partner institutions (elderly people organisations, schools, etc.) and 1825 participants.

A learning journey

By analysing and reviewing the activities, we are constantly modifying and improving them and, thanks to the comments of the participants, discovering new aspects and unintended outcomes. As the space is limited, we will only mention two of them here.

Fiction as a promoter of learning.

Tell me about your technologies workshops have evolved quite considerably from the initial design, in particular on the choice of the final restitution format. At the beginning, we focused on the production of an audio-visual reportage, with interviews of the participants. The films were (and are) very interesting, but we considered that the introduction of a fictional element could have enhanced the group spirit and tightness (see also Merzagora et al., *Building an empowered relationship with science* in this Book of papers). We tested the shooting of a fiction film, with a script developed by the participants. This activity, in the framework of the project “Euritage” (in collaboration with the Austrian Science Centre Netzwerk), was aiming at telling an anachronic history of technology starting with the following question: “What if social networks had existed in 1969?” How would the landing on the Moon would have been narrated? The workshops allowed the elderly to share their personal account of this major social and scientific event, while the teenagers could share their knowledge of social networks. The experience was very positive, and we therefore extended the approach to other workshops, in particular those that are run within schools, with 10 to 18-year-olds (www.atomes-crochus.org/breve95.html).

By introducing an important element of creativity and imagination in the workshop, children and elderly participants can develop an ownership of the scientific, technological and historical content (personal or collective) that they have shared in the previous sessions. They can translate them and re-tell them in their own language, and

embed them in their own universe. Moreover, the realisation of a fiction production allows everyone to express their own skills, whereas a journalistic reportage creates a separation of roles among those who are in charge of filming an interview (often the teenagers) and those who are filmed and interviewed (often the elderly).

Partnerships.

The project relies on precious partnerships with institutions that currently work with very diverse citizens of different generations. This obliged us to create links with new interlocutors, with core missions very different from *Les atomes crochus*, but acting at a social level in the same areas. This is the case of several institutions dealing with elderly people. Moreover, high school students, traditionally a public very difficult to reach and engage in scientific culture, proved to be very receptive, enthusiastic and proactive in the exchanges with elderly people. We tested in particular a workshop in a secondary school for vocational training, with a group of young people initially very passive, but who while progressing in the workshop started being passionate about the dialogue with elderly people who were professionally engaged in subjects that they were studying during their school year. *Tell me about your technologies* has thus the additional benefit of diversifying the public we work with and establishing precious collaborations with key components of society with which we seldom have any contact.

Workshops and *stages* truly allow the participants to be active transmitters of knowledge. This works because all participants, whether they are young or old, have something to bring, learn, tell, share with others. Science and technology allow this. The design of the workshop has the role to raise their awareness that they indeed are carrier of precious, valuable knowledge, and empower them to share it with other people.

In one of the videos shot during the workshops, at the end of a series of interviews about memories related to the coffee grinder, one of the elderly participants states with a surprised gaze on their eyes: “gee, we do have things to say about a simple coffee grinder!!” She used the word “to say”, not “to learn”. Yet, they were learning a lot about the technology of grinding. Similar expressions were used by young people after long discussions on the functioning of a Wii remote control. These are the crucial elements of

the project: discovering through sharing, and the fulfilling sensation of realising that we do have a lot of knowledge about technological objects, and a lot of things to say about science and technology.

Future

We are currently developing a series of new topics and scenarios for the workshops, including a full operational kit that would facilitate the running of the activities. In fact, at present the activities strongly rely on the quality of expert facilitators, that need to ensure that the dialogue sparks, being at the same time as discrete as possible. Although we value this aspect, we would also like to make available activities that can be run by a local facilitator.

Also, the partnerships established during the development of the project made us aware of several accessibility problems. We are now reviewing some of the activities to make them more accessible to, for example, non-independent elderly people, and refine the content to make them more adaptable and capable of taking into account specific lay expertise that can be encountered when working with specific groups of elderly or younger people (e.g., specific school subject for the teenagers, specific working experiences of the elderly).

In addition to what was outlined in previous sections, two other elements represent for us a measure of success: the sensation expressed by both elderly and children to have enjoyed a space in which they were able to express themselves and in which their message was truly heard, in a world that tend to undervalue their point of view. And the fact that some groups continued, independently of our workshops, to do activities together, such as “intergenerational museum visits”.

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