YOUNGSTER IDENTITIES IN THE CONTEXT OF ONLINE COMMUNICATION, NEW TECHNOLOGIES, AND VISUAL INFORMATION

SUMMARY REPORT OF PROJECT OUTCOMES 2010-2015

In this summary report you'll find the formal and material outcomes of the educational and social activities in which Ms. Beata Staszynska (Fundacja Citizen Project) and Mr. Onno Hansen (Ezzev Foundation) were author and/ or partner in the period 2010-2015 associated with the subject: youngster identities in the context of online communication, new technologies, and visual information. Not included are Beata Staszynska's extra-project educational activities and Onno Hansen's e-commerce activities and activities in the field of semantic search and validation.

FORMAL PROJECTS

Ms. Beata Staszynska and Mr. Onno Hansen were formally involved in the following European and Polish national projects, together with a range of international partners from twelve countries (the Netherlands, Poland, Greece, the UK, Cyprus, Lithuania, Spain, France, Italy, the Czech Republic, Switzerland and Turkey): academic institutions, schools, NGOs, local government organizations and companies.

European projects

- CDEI, 2011-2013, co-financed by the European Commission (Fundamental Rights and Citizenship)
- Dynamic Identity, 2012 – 2015, co-financed by the European Commission (Lifelong Learning Programme)
- Web2Learn, 2013 – 2015, co-financed by the European Commission (Lifelong Learning Programme) – winner of the 2015 1st prize INTERNATIONAL PRIZE at the Festival van het Leren
- Talking about Taboos, 2013 – 2015, co-financed by the European Commission (Lifelong Learning Programme)
- Identifeye, 2013 – 2015, co-financed by the European Commission (Lifelong Learning Programme)

Polish national projects

- Obywatel Solidarnosc, 2010 – financed by the National Centre for Culture (NCK)
- Dynamiczna Tozsamosc, 2012 – co-financed by the Polish Minister of Culture (MKiDN)
- Dynamiczna Tozsamosc, 2013 – co-financed by the Polish Minister of Culture (MKiDN)
- Dynamiczna Tozsamosc, 2014 - 2016 – co-financed by the Polish Minister of Culture (MKiDN)

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FORMAL OUTCOMES

- 5 books: 1 project book and 4 educational modules, published as book and/ or e-book/ pdf:
  - This is the book AR"S" in project Obywatel Solidarnosc/ Citizen Solidarity, 2010 (book/ pdf) containing interviews with 66 individuals including Mr. Lech Walesa and Mr. Francis Fukuyama
  - Dynamiczna Tozsamosc, 2012 (book/ pdf)
  - Dynamic Identity, 2015 (book/ e-book/ pdf)
  - Identifeye (pdf) based on CDEI, 2015 (resources online)
  - E-LAB Dynamiczna Tozsamosc, 2015 (book/ e-book/ pdf) (PL)
- 5 educational AR games (guidelines how to play are in the Dynamic Identity book for the downloadable games – see above; in the Identifeye e-book for the online games on online data sharing and online identities and the game on didactics; on the Dynamiczna Tozsamosc 2013 website and on YouTube for the game on emotions online:
  - On online data sharing and online identities (downloadable/ online)
  - On profiling (downloadable)
  - On didactics (online)
  - On emotions online (online)
  - On the importance of sports (online)
- 1 AR engine to create AR games by means of a CMS – see the Identifeye book
- 1 AR app (downloadable)
- 4 good practices:
  - Web 2.0 tools
  - Who are you until now (short version)
  - TaT/ Think and Talk
  - C2C/ Citizen to citizen
- 85 videos
  - 66 interviews on solidarity in Poland, 2010 (each with bonus material in AR)
  - Dynamiczna Tozsamosc trailer 1, 2012 (PL)
  - Dynamiczna Tozsamosc, trailer 2, 2012 (PL)
  - Dynamiczna Tozsamosc a Edukacja Medialna, 2012 (PL)
  - CDEI instruction video (8-11) (12-14), 2012
  - AR game registration, 2012
  - A dog looks for a home/ March against homeless animals, 2012 (PL) (info; PL)
  - What do adults (not) know about us, 2012 (PL)
  - Living together, 2012 (PL)
  - Video clip: Lipali – Najgrozniejsze Zwierze Swiata, 2012 (director's cut)
  - Dynamiczna Tozsamosc trailer 3, 2013 (PL)
  - Dynamiczna Tozsamosc – B.E.L.S. method, 2014 (PL)
  - Video clip: Oczi Cziorne - AOEIUX, 2014
  - Aleksandra Olszewska, 2015
  - Dynamic Identity promotional video 1, 2015
  - Dynamic Identity promotional video 2, 2015

    - Interviews on (perceived) social exclusion, 2015
    - Identifeye promotional video, 2015
    - First aid prophylactics for youngsters, 2015
- 12 conferences (co-)organized:
    - Citizen Solidarity, Gdansk, 2010 (photos) – with lectures and a workshop by Stedelijk Museum Amsterdam (NL)
    - On education in the age of Internet/ Janusz Korczak, Gdansk, 2012 (video registration: part 1, part 2, part 3, part 4, part 5, part 6; PL)
    - Dynamiczna Tozsamosc, Gdansk, 2012 (PL) (photos)
    - Dynamiczna Tozsamosc, Gdansk, 2013 (PL) (photos)
    - Dynamiczna Tozsamosc 2, Gdansk, 2013 (PL) (photos)
    - Dynamic Identity debate with vice-president of the European Commission Viviane Reding and MAC Minister Michal Boni, Warsaw, 2013 (video registration)
    - Sesja warsztatowa Dynamiczna Tozsamosc, Gdansk, 2014 (PL) (photos)
    - On prophylactics in sports, Gdansk, 2014 (PL) (photos)
    - On (perceived) social exclusion, Amsterdam, 2014 (photos)
    - On soft skills for PE teachers, Gdansk, 2014 (PL) (photos)
    - On soft skills for PE teachers, follow-up, Gdansk, 2015 (PL) (photos)
    - Sesja warsztatowa Dynamiczna Tozsamosc, Gdansk, 2015 (PL) (photos)
- Class under patronage, 2014 -
- Installation TELEPORT.ART, Gdansk/ Gdynia, 2010 (resulting pictures) (photos)
- AR Installation PERFORMANCE INSTALACJA "S" (PL), Gdansk, 2010 (video)
- 6 concerts organized, Gdansk, 2010 (video clip Lipali – PAN in AR)
- Articles, blog posts and curated content
    - Identifeye: Augmented Reality game for online identities. In: *JSIE*, Volume 1 (2011), Issue 2
    - On Twitter
    - On the Identifeye blog, 2012 -
    - On Frankwatching, 2013 -
    - On Facebook, 2013 -
        - Obywatel Solidarnosc/ Citizen Solidarity (profile)
        - Dynamiczna Tozsamosc (profile; PL)
        - Class under patronage (page; PL; upcoming: group)
        - Identifeye (page; group)
        - Akademia Dynamiczna Tozsamosc (page; PL)
        - Dynamiczna Tozsamosc 2014 – 2016 (page; PL)
    - In: Smart Metropolia, 2014
- Pictures
    - Dynamic Identity (2013, 2014, 2015)
    - Identifeye

The projects mentioned in mass media

- Dynamiczna Tozsamosc (TVP, TVP Gdansk, Radio Gdansk)
- Trojmiasto.pl (Obywatel Solidarnosc – start 2010; Obywatel Solidarnosc – Augmented Reality 2010; Obywatel Solidarnosc - project 2010; Obywatel Solidarnosc - postulates 2010; Obywatel Solidarnosc – Augmented Reality 2011; Dynamiczna Tozsamosc, 2012; PL)
- Onet (Obywatel Solidarnosc – project 2010; Obywatel Solidarnosc - postulates 2010; PL)
- Gazeta.pl (Obywatel Solidarnosc – postulates 2010; PL)
- TOK FM (Dynamiczna Tozsamosc 2013; How to talk about "otherness" 2014; About material outcome 1, 2015; PL)
- de Volkskrant on material outcome 1 (2015; NL)
- RTL on material outcome 1 (2015; NL)

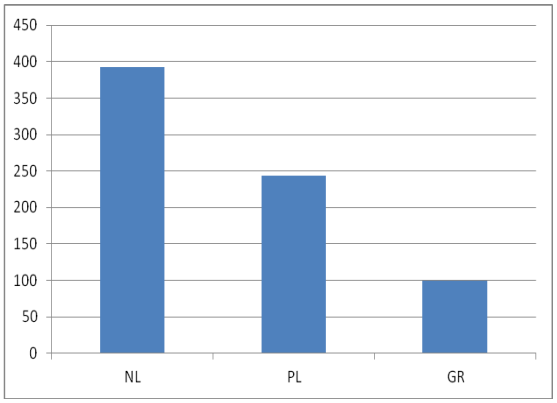
MATERIAL OUTCOMES METHODOLOGY

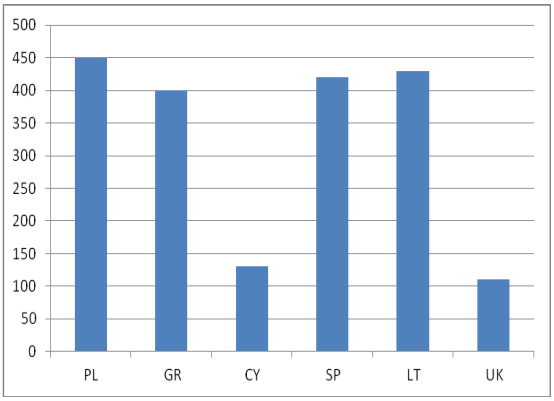
The project data underlying the material outcomes below stem from intensive interviews with 2,674 students (aged 8-18) in class rooms in seven EU countries (in five countries only adults were targeted) and questionnaires on specific module related topics within the various projects. Ms. Staszynska and/ or Mr. Hansen were directly involved as instructors in class rooms in three EU countries in which 734 students were present (the Netherlands, Poland and Greece) and indirectly involved in the class rooms in the remaining EU countries. In total 226 teachers and 24 instructors were involved in the projects.

The material outcomes rest heavily on the intensive interviews ("dialogues") and the questionnaires in settings in which Ms. Staszynska and/ or Mr. Hansen were present. Because of their presence they know the contexts in which the measurements took place. And these contexts are crucial, as will become clear in material outcome 5: the didactics used and the resulting trust level of the relation between instructor(s) and students change the level of student openness and the kind of answers they provide, even though they would be the first to deny this (see material outcome 4).

The data gathered in the class rooms were confronted with the scientific literature that was used to design the project modules and with additional scientific literature that was deemed relevant. An important selection criterion for the additional literature was that it had to be recently published. The data and the selected literature were then compared with relevant research outcomes and relevant news items. "Relevant" for all sources is to be understood as relevant for the central projects' subject: youngster identities in the context of online communication, new technologies, and visual information. The additional sources stem mostly from countries in Europe and the USA, geographical entities that for purpose of the description of the material outcomes below are taken as one single context, except when stated differently.

Students involved in the various projects per country – direct and indirect





8 MATERIAL OUTCOMES

1. Youngsters prefer asynchronous communication

Although many youngsters think that face-to-face contact is more important, they prefer text chatting over offline meetings and making telephone calls.

2. Youngsters lack a ready-made identity narrative

Traditional theory claims that we have a ready-made story by ourselves about ourselves in our head. Most youngsters only have a vague notion of who they are and formulate who they are on the spot.

3. Communication between generations is troubled

Many youngsters and parents do not trust each other when it comes to what youngsters experience online. Many youngsters think that adults lie and calculate while adults are overprotective.

4. Youngsters claim to always be themselves

Many youngsters state that they act the same and say the same things in any situation. But an outside observer can see them act differently and say different things in different situations.

5. New technology is a key to open up youngsters

New technology and online communication are enough for many youngsters start a trust relation. Adults who understand online life seem to be easily trusted as well.

6. Youngsters are digital naives

Although youngsters grew up with the Internet, they rarely think critically and reflectively about new technologies, visual information or online communication.

7. Multitasking interferes with youngsters' identities

Multitasking equals quickly hopping between tasks, not doing them at the same time. This is exhaustive and for many youngsters leads to a fragmentary auto-definition of who they are.

8. Guidelines

Wise adults who understand online life are needed to empower more critical and reflective thinking by youngsters on new technologies, visual information and online communication.

Material outcome 1 – Youngsters prefer asynchronous communication

Method used: dialogue

Already in 1996 Joseph Walther (*Computer-Mediated Communication*, 1996) did research on situations in which contact between individuals takes place online only. He called this type of communication: "Hyperpersonal Computer-Mediated Communication" (CMC). One of the effects of CMC according to him was that conflicts may be "far less severe in asynchronous CMC". Secondly, according to him CMC relieved those who are communicating from stress related to time pressure: there is time for "editing, composing". As Walther wrote: "in asynchronous interaction one may plan, contemplate, and edit one's comments more mindfully and deliberatively than one can in more spontaneous, simultaneous talk ... Asynchronous communication allows users to control interaction to a greater extend ... asynchronous communication is more inter-subjective and less egocentric than is unplanned (spontaneous) discourse."

Although the positive aspects, as described by Walther, were known to the instructors of the second pilot of the Dynamiczna Tozsamosc project (Gdansk, Poland, 2012), they were surprised when a youngster (age group 15-18) blurted out in a discussion during the pilot that she preferred online communications over offline communications, because online "there were no barriers" whereas offline "there were too many barriers". The instructors at first thought that they misheard the statement because, notwithstanding the potential positive aspects of asynchronous online communication, they operated with the dominant adult frame that it is online communication that comes with barriers, because of the limitations of intermediate devices (f.i. keyboards and monitors/ screens), sharply reduced signals (f.i. no nonverbal communication) and a lowered level of spontaneity. But, when asked, the girl repeated her statement verbally once more.

The instructors then asked the other youngsters present what their feelings were on the girl's statement and they all – without exception – told the instructors that they agreed with the girl. They explained, in line with Walther, that during online asynchronous communication there is time for composing and editing – time that is lacking in real life. One student said that direct, offline contact for him was stressful because an immediate reaction was expected. Another student said that he felt that he had no control over his communication in real life, while online he did, just as Walther had written.

The instructors then asked whether the dialogue that they were having at that moment with the youngsters was stressful for them too, to which all present said yes. But, one of them declared, this stress was bearable, because the communication took place in a situation of trust. All others agreed. And, many youngsters told us that they thought that communication in real life is far more valuable than asynchronous contact online. This statement is affirmed by Dutch research by CBS (2015) stating that 96% of the youngsters in the Netherlands prefer personal meetings over meetings on social media; only 4% prefers social media contact over personal meetings. That's why they were willing to try and overcome the barriers that they experienced offline. A first blog post on this subject was written in 2012.

From this moment on the hypothesis that online, asynchronous communication is seen by youngsters as a communication without barriers while direct, offline contact is seen as contact that is

full of barriers, was tested in dialogues the instructors had in class rooms: in Poland, in the Netherland and in Greece. And everywhere the predominant answer was that youngsters (aged 11-18) agreed with the hypothesis.

Research outcomes show a slightly more nuanced image though. Ofcom (2015) research found for the UK: "There is no consensus among 12-15s regarding the statement: "I find it easier to be myself online than when I am with people face to face"; with around one-third each saying they agree (34%), disagree (35%) or are neutral/ unsure (31%)." In the USA (2014) only 15% prefers social media interaction over face-to-face contact. Mediawijzer (2015) found for the Netherlands that 56% says that online contact is handier than face-to-face contact. 38% says that it is easier to talk online than offline. 15% can say more online, 13% feels less shy and 10% thinks it's more fun to communicate online. 73% percent prefers face-to-face contact for group contact; 68% for individual contact. Stopphubbing on the other hand states: 87% of the teens would rather communicate via text than face-to-face.

To the instructors youngsters explained that they didn't prefer online contact as such but online asynchronous contact: contact that did not require an immediate, spontaneous answer.

Having the preferences for asynchronous online contact in mind, four current trends take on more meaning:

- Over the last five to ten years youngsters have started to prefer texting over talking when communicating with their mobile phones. This is for instance noted in the 2011 PewResearchCentre report *Americans and text messaging*: "Heavy text users are much more likely to prefer texting to talking. Some 55% of those who exchange more than 50 messages a day say they would rather get a text than a voice call. Young adults are the most avid texters by a wide margin. Cell owners between the ages of 18 and 24 exchange an average of 109.5 messages on a normal day". Time wrote in 2012: "The telephone call is a dying institution. The number of text messages sent monthly in the U.S. exploded from 14 billion in 2000 to 188 billion in 2010, according to a Pew Institute survey, and the trend shows no signs of abating. Not all of that growth has come out of the hide of old-fashioned phoning, but it is clearly taking a bite — particularly among the young." And the Huffington Post claimed in 2012: "A British study conducted by independent media regulator Ofcom found that among 16- to 24-year-olds, phone calls are being superseded by texts or other e-messages. Per the research, 96 percent use some form of text-based communication – either though social networks (73 percent) or through traditional texting (90 percent) – on a daily basis. ... And new research from Pew finds similar trends among teens. As NBC News explains, 63 percent of teens text every day, compared to only 39 percent making or taking cell phone calls daily. ... Taken together, these studies appear to foreshadow a time in the not-so-distant future when text-based messages are the norm and phone calls are thought of as a quaint, nonessential way to get in touch." The Atlantic found in 2014 that 87% of high schoolers texts every day against 34% making a phone call. In the UK the situation seems to be, as Ofcom research shows: "In 2015 mobile users aged 8-11 made an average of nine calls and 41 text-based messages, and 12-15s made an average of 22 calls and 135 text-based

messages." These numbers concern average weekly use. Only in the Netherlands (Mediawijsheid, 2015) calling still is almost as popular as sending messages.

- One of the major motivations for texting is avoiding real-life contact. The PewResearchCentre report *U.S. Smartphone Use in 2015*, states: "47% of young smartphone owners used their phone to avoid interacting with the people around them at least once during the study period, roughly three times the proportion of older smartphone owners who did so."
- Phubbing: The act of snubbing someone in a social setting by looking at your phone instead of paying attention. (Source: Stopphubbing)
- According to Ofcom research (2015) youngsters think that people behave differently online than offline: "Seven in ten (72%) agree: "I think most people behave in a different way online to when they talk to people face to face"; with close to one in ten disagreeing (8%), and the remainder (19%) neutral or unsure." The AAP (American Academy of Pedriatics) disagrees with this assessment though in their media guidelines for youngsters: "Media is just another environment. Children do the same things they have always done, only virtually."

While the youngsters in the project predominantly agreed with Walther's statements that asynchronous online contact relieves individuals from stress and allows them to control communication to a greater extend, none agreed with his statements that conflicts are less severe while communicating in this way or that communication is more inter-subjective and less egocentric.

The reactions to yet another aspect of CMC that Walter mentions, were mixed. Walther stated after his research that the effect of CMC was not limited to communication. According to him it also had an impact on self-presentation. Walther wrote: "CMC provides, in some cases, opportunities for selective self-presentation, idealization and reciprocation. This renders hyperpersonal communication, forms of interaction that exceed what we may accomplish FtF [face-to-face], in terms of our impression-generation and relational goals."

This is still a popular line of thought among researchers. Sherry Turkle (*Alone together*, 2011) for instance strongly propagates the view that youngsters hide behind their beautiful online masks. Researcher Bibi van den Berg (in the Dynamic Identity project, 2012-2015) also stresses that youngsters use their profiles predominantly to show off a better life than they actually have. Howard Gardner & Katie Davies (*The app generation*, 2013) claim that in their research they have gathered "considerable evidence that youth take care to present a socially desirable, *polished self* online." Girl Scouts research (2010) in the USA found: "Seventy-four percent of girls agree that "most girls my age use social networking sites to make themselves look cooler than they really are." Forty-one percent admit that this describes them". The research also mentions that especially girls with a low self-esteem "admit that their social networking image doesn't match their in-person image".

TNW (2016) writes about the effects of the resulting social comparison: "Children are struggling with low self-esteem, loneliness or deep levels of unhappiness as a result of using the Web, a new study published by [ChildLine] suggests. "It is clear that the pressure to keep up with friends and have the perfect life online is adding to the sadness that many young people feel on a daily basis," said Mairead Monds, ChildLine service manager in Northern Ireland." This would mean that there is something like a self-reinforcing low self-esteem loop.

Youngsters in the workshops were not so sure about all this. While many admitted that they use their profile often to portray their lives as more interesting than it actually is, none of them saw this as a goal in itself or as something that serious. For them it rather is a regular part of online communication just as showing silly pictures is and engaging in jokes is.

Material outcome 2 – Youngsters lack a ready-made identity narrative

Methods used: dialogue, exercise

According to influential social-psychologists, such as Anthony Giddens (*Modernity and Self-Identity, 1991*), our identity equals our identity narrative: the story we tell about ourselves to ourselves and to others.[1] Giddens writes: "A person's identity is not to be found in behavior, nor – important though this is – in the reactions of others, but it the capacity to keep a particular narrative going." The idea behind this interpretation is that we reflect the understanding of ourselves into an "ongoing 'story' about the self" which is "the individual's biological narrative". At any given moment only one narrative can exist for a person, according to the theory, and the narrative has to be internally consistent. When prompted to define oneself, every individual should be capable of presenting this narrative about themselves to themselves and to others, so the theory tells us. This theory underlies the European Union 's Right to be Forgotten.

In first pilot of the Dynamiczna Tozsamosc project (Gdansk, Poland, 2011), an exercise was introduced that involved workshop participants (aged 11-14) answering the question: "Who are you until now?" The question "Who are you" is the generally agreed upon question in identity literature to ask about identities. The addition of "until now" was devised to trigger a deeper reflection by asking for an evaluation of one's identity not in general but up until now, thus stressing the assumed dynamic nature of our identities that is explicit in the narrative approach as well as in the project.

In the workshop exercise the question was asked twice, each time in a different setting. The first time participants would be taken out of the class room in which they were passively listening to an introduction on an identity-related theme, and would be asked individually, away from the group, to stand in front of a camera, very close to the objective. Without any introduction the question would then be asked by a second instructor, after which there was a thirty second to one minute interval for an answer of for being silent. The individual answers were then shown to the whole group, not by means of video but by means of Augmented Reality: the individual participants were asked to show a marker to a webcam while being visible on a large screen. On the place of the marker then the registration of their answer would appear while the participants would also still be visible. When the participants would move the marker around gently, the shown registration video would move gently with them on the screen. When the participants would move the marker vehemently though, the

[1] Contrast this with psychologist Dan McAdams who describes the development of personality in three steps. The construction of "life narratives" is only the third step. The first step is genetic – it consists of "the sorts of broad dimensions of personality that show themselves in many different situations and are fairly consistent from childhood through old age. These are traits such as threat sensitivity, novelty seeking, extraversion, and conscientiousness." The second step concerns "characteristic adaptations." These are traits that emerge as we grow. ... people develop them in response to specific environments and challenges that they happen to face." (Quotes from Jonathan Haidt, *The righteous mind*, 2012) Step one and two seem linked to Paul Ricoeur's (*Oneself as another*, 1992) memete and ipsete. According to Haidt "life narratives" are not without value. Although "they are simplified and selective reconstructions of the past, often connected with an idealized version of the future" and "are to some degree post hoc fabrications" these life narratives "still influence people's behavior, relationships, and mental health".

registration video would stop – only to resume after the marker was held relatively still again. Therefore, if participants would show their emotions too expressively, the showing of the recording would be interrupted and the attention of the class would focus on their face. This setting predominantly evoked timid reflection.

The second time the participants had to answer the question they had already had the experience of the first time – both the registration and the viewing of themselves by means of Augmented Reality – and had gained knowledge and experience in the workshop about identities and film language. This time they were not guided in front of the camera as actors but were able to individually direct their film clip as directors. They were free to choose their own setting (frame size, background, lighting) in which they would answer the same question once more. In a final session participants would watch their two answers as videos back-to-back and then evaluate them.

The exercise was formally implemented again in two subsequent projects: Dynamiczna Tozsamosc 2012 in Poland and Dynamic Identity (2012-2015; age group: 11-18) in Greece, the Netherlands and Poland. In Greece the exercise was executed semi-legally since no filming of students formally can take place in schools – but in the project the filming of youngsters doing this exercise took place outside of the class room and with their parents present.

What was striking was that only about 5-10% of the participants (youngsters in the age group 10-18 and adults in age group 21-60) answered the question in the two different settings identically or near identically. The other participants either added or subtracted information (ar. 30-40%) or changed their answer completely or nearly completely.

When asked why participants gave a (near) identical answer twice, they would answer something like “that is who I am”, “that is my answer”, or “that is how it is”. When those who added or subtracted information were asked why they changed their answer, they gave answers such as “I had time to think about it more”, “I was more prepared” or “I saw myself and decided I wanted to change elements”. When those who changed their answer (near) completely were asked they would answer “the first time I did not know what to say”, “I was not prepared” or “I was spontaneous first and then I thought about it”.

From the dialogues that followed after every answer only the participants who had answered the question twice (nearly) identically stated that this is how they saw themselves. The others indicated that they actively sought to construct an answer that was both fitting to them and to the setting in which they were to answer the question. To the follow-up question what it was that made the answer fitting, no participant went beyond a statement of the type “that’s how I felt it”.

In contrast with the answers given by the majority of participants at least the answers provided by those who repeated themselves (nearly) identically seem, at first sight, to affirm the assumption that individuals possess a coherent, ready-made narrative about themselves. But, when focusing on what kind of self-description these participants provided when answering the question, this would-be affirmation becomes more problematic. The participants would typically say things like “I am human”, “I am me” or “I am a student and I love to play guitar”. Their statements were hardly what one would expect to find in a narrative that was constructed over many years. Rather, the answers

consisted of truisms or an enumeration of a (small) selection of the roles that the individuals perceived to be playing[2].

For the instructors it was unexpected that such a small percentage of the participants presented their answers consistently. Consistency of our narratives is supposed to be essential according to socio-psychologists like Giddens and according to leading neuroscientist (see f.i. scientists quoted in Anil Ananthaswamy, *The man who wasn't there*, 2015 – see outcome 7).

Robert Cialdini (*Influence*, 2007) sees consistency even as "automatic, stereotyped behaviour" (see also notes on Cialdini). He explains the importance of consistency: it concerns how we are seen. Cialdini writes: "The person whose beliefs, words, and deeds do not match may be seen as indecisive, confused, two-faced, or even mentally ill. On the other side, a high degree of consistency is normally associated with personal and intellectual strength. It is at the heart of valued human characteristics such as logic, rationality, stability, and honesty."

Why would participants not conform with this basic, social mechanism of the human social brain? A possible explanation for the lack of consistency is that participants might not want to reveal their true narratives, or their complete true narratives, in a workshop setting and therefore tweaked their answers in such a way as to only reflect the role they play within the given frame. This would be fully in line with the theories of Erving Goffman (see outcome 4). But, a complicating factor with regard to this explanation is that youngsters almost without exception claim that they do not play roles and do not present different versions of themselves in different situation but always are the same person – see outcome 4. Only if a punishment can be foreseen, many say that they censure themselves but that does not mean, so they stress, that they say something different instead.

Another explanation for the findings in the workshops can be the theoretical frame of Zygmunt Bauman: liquid life. According to Bauman *(Identity*, 2004; *Liquid life*, 2005; *Liquid times*, 2007) the pace of life and changes in modern society having become so fast and so profound that there is no way to stop and think or reflect. In order to survive in these fast times individuals try to adapt as much as they can, anxious not to fall behind and become obsolete. Those individuals do not try to build one, definite narrative out of the puzzle pieces that make up who they are, but they all the time reconfigure the puzzle pieces and fit them to the circumstances into new configurations.

EGE, an advisory organization to the European Commission, links to Bauman and speaks about our "fluid self": "Its relevance for ethical reflection lies in its impact on the traditional concepts of 'authenticity' and 'autonomy': fluid or hybrid identities may threaten the consistency and continuity that has been considered to be crucial for the concept of a practical identity, which ultimately relies upon a self that may not only identify with his or her actions but is also identified by others. Hence, the new possibilities for shaping one's own identity, constrained only by the features and rules of the programs one uses, make social relationships potentially insecure; ethical concepts such as trust,

[2] The relative predominance of roles in the answers of the participants is striking. Individuals in individual cultures are, according to Jonathan Haidt (*The righteous mind*, 2012), "likely to list their own internal psychological characteristics" whereas individuals in collective cultures "are more likely to list their roles and relationships".

truthfulness or reliability may lose their function to create spheres of belonging — while at the same time enforcing short-term relationships that can easily be replaced."

Bauman's liquidity is empowered by features and functionalities of new technologies that we use to present ourselves online. Facebook's timeline for instance challenges the notion of identities as coherent, non-contradictory narratives by us on ourselves. Facebook's timeline shows multiple versions of our story that have developed over time in one place: our Facebook profile. In addition, others add their content to that same place so that our narrative is no longer only "by ourselves". EGE comments on this: "Facebook now allows its members to store a life story and hence structure their entries in a diachronic manner. Memory and forgetting are complementary concepts for personal identity: without some forgetting and the necessary selection process in giving meaning to one's identity, the creation of an identity of the self (ipse) becomes more and more dependent on the socially ascribed 'markers' of identification (idem)."

Possibly Bauman's liquidity was triggered by the add-on "until now" to the identity question.

To find out more about identity narratives, the setting of the question was changed in follow-up workshops like in the project Talking about Taboos (all age groups) and the project Dynamiczna Tozsamosc 2014-2016 (all age groups). In a shortened version of the exercise above the question was now asked once per individual in a group of participants. Every participant was asked the question "Who are you until now" while facing a camera, and while being in a class room together with other participants. The instructor asking the question was holding the camera while giving attention only to the individual participant in front of the camera. The instructor did not refer to anything or anyone beyond the here and now and beyond the instructor and individual participant. The instructor implemented intense listening, patience, good will, honesty and respect while interacting with the participant.

This situation was to provoke feelings of acuteness and of trust, as well as a sense of agency. This setting was loosely based on Emmanuel Levinas' (*Totalité et infini*, 1961) description of a meeting between two people in which all references to the outside world have vanished and in which the participants who meet can initiate a fresh new contact, transcending the norms of society, and, as a result, can be as open as they choose to be. This setting was to test out whether it was the setting that made individuals self-conscious to the extent that they would tweak their narrative.

The question in this short exercise was presented to all participants, one-by-one, with the instructor changing positions all the time to face the next participant. The interaction with all participants was identical but very personal.

After all participants answered the same question individually, patterns would be visible in the answering. Mostly it was the case that the first person took the longest time to answer. Applying Erving Goffman's insights (*The presentation of Self in everyday life*, 1959; *Frame analysis*, 1974) this occurs because there was no apparent frame ready for this participant to build upon. There was no ready-made mould to model the answer after and no given definition that described the situation or explained what was asked of the participant. The second and following participants typically would answer quicker. For them a mould did exist – the one created by the first participant.

Sometimes participants mostly or exclusively used the frame that was created by the first participant. Sometimes some or many participants ignored the frame that was created by the first person and created a fresh frame. More often than not the second participant in line would use the frame as provided by the first participant. But often it was the third participant who would either deviate or follow the first two participants – in which case more participants would follow.

It was observed that the better participants knew each other and were in close contact with each other beyond the workshop setting, the more participants followed the frame of the first participant. The less the participants knew each other, on the other hand, the more participants chose their own frame. The occurrence of a repeated frame thus seemed to point at the stronger or less strong influence of peer pressure.

Given the outcomes of the first setting it seems highly unlikely that the individuals who were asked the identity question had a coherent, non-contradictory individual narrative in their head that was waiting to be prompted. The outcomes from both settings point at the influence on the individuals' answers by the setting in which the question was asked.

Some participants during the second round of the Dynamic Identity pilots in the Netherlands stated that what they thought about themselves was both irrelevant and uninteresting. To them what others said about them was much more interesting.[3] Howard Gardner & Katie Davies (*The app generation*, 2013) found that the identities of youngsters nowadays are "more externally oriented". Maybe, there is something in Zygmunt Bauman's (*Moral blindness*, 2013) statement that "the updated version of Descartes's Cogito is 'I am seen, therefore I am' – and that the more people who see me, the more I am …"

This external orientation may lead anxiety. Peter Ditto claims that most of our knowledge about the world isn't grounded in direct evidence, but socially-based: "The way we know we're right is when most people around us agree." Social evidence online is different for different individuals because of the majority illusion. Social evidence is another social mechanism of the human social brain according to Cialdini (*Influence*, 2007). The downside of it is that when the social evidence is at loggerheads with our internal beliefs our entire self can feel threatened, causing a crisis.

Steven Laureys (quoted in Anil Ananthaswamy, *The man who wasn't there*, 2015) claims that our awareness consists of two dimensions: awareness of the external world and internal awareness. According to him "one works at the expense of the other". He explains: "Studies in healthy patients showed that these dimensions of awareness are inversely correlated: if you are paying attention to the external world, then activity in the network associated with external awareness goes up while

[3] This is in line with the writing of Jonathan Haidt (*The righteous mind*, 2012). He states: "For a hundred years, psychologists have written about the need to think well of oneself. But Mark Leary, a leading researcher on self-consciousness, thought it made no evolutionary sense for there to be a deep need for *self*-esteem. For millions of years, our ancestors' survival depended on their ability to get small groups to include them and trust them, so if there is any innate drive here, it should be a drive to get *others* to think well of us."

the regions associated with internal awareness dampen down." For many current youngsters this seems to mean that because of their more external orientation their internal orientation become less active. This could explain the outcome that the individuals who were asked the identity question had no coherent, non-contradictory individual narrative in their head that was waiting to be prompted, because in the vision of Laureys internal awareness equals awareness of "aspects of one's self. When you are self-aware, in that you are conscious of your own body, your memories and your life story, aspects of the self become the contents of consciousness. These comprise the self-as-object."

Uta Frith (quoted in Ananthaswamy, 2015) takes the thought a step further. In her vision "the self can be broadly divided into two: a prereflective self-awareness (the "I," or the self-as-subject) and a reflective part (the "me," or the self-as-object)." The reflective part of us is according to Frith linked to our ability to understand what others think and feel, our so-called Theory of Mind. A less functional Theory of Mind can be found in autism. A person with autism has an inability to effortlessly fathom people's emotions. This situation is taxing for that person: "[one] has to compensate by paying conscious attention to, say, body language and facial expressions ... No wonder social situations continue to be a source of anxiety."

Projecting these mechanisms on the more external orientation of quite a few youngsters and the resulting lower awareness of, among other thing one's memories and one's life story, which then lead to a less developed self-as-object, then it now is more understandable why youngsters would see barriers in their communication in real life. If to this a diminished ability to understand nonverbal communication is added – see outcome 3 – then these barriers become even bigger for youngsters. This is not to say that many youngsters suffer from autism but it seems that some of the mechanisms underlying autism might provide an insightful frame.

This hypothetical state of quite a few youngsters has a good side. It makes these youngsters far more open to a flow, in which the concept of self would only hinder. A flow is a situation in which "individuals [become] completely absorbed in the activities in which they are engaged" (Wiliam, *Embedded formative assessmen*t, 2011). Mihaly Czikszentmihalyi, the originator of the concept, describes "flow" as: "the satisfying, exhilarating feeling of creative accomplishment and heightened functioning" (quoted in McGonigal, *Reality is broken*, 2011). Ananthaswamy (*The man who wasn't there*, 2015) explains how a less present concept of self is linked to this situation of flow: "the loss of self-consciousness does not involve a loss of self, and certainly/ not a loss of consciousness, but rather, only a loss of consciousness *of* the self. What slips below the threshold of awareness is the *concept* of self, the information we use to represent to ourselves who we are." Unfortunately, multitasking – see outcome 7 – is often hindering the coming into existence of a flow, providing its own alternative, addictive dopamine loop.

Another good side is that, according to Ananthaswamy, the reverse situation, an enormous conceptual self, leads to very negative consequences: "It would not be a stretch to say that many of society's ills can be attributed to an unbridled conceptual self, which wants too much or fights to preserve reified identities ... Coming to terms with the self's mostly fictitious nature (the unresolved issue of subjectivity notwithstanding) may help to rein ourselves in."

Leaving the consequences for now, the second outcome thus can be summarized as follows. Identity narratives are most probably not present in most youngsters as a conscious narrative that has been developed over years. The identity narratives available seem to be flexible and depend on the setting and on the audience to which the narrative is directed. But, this is in complete contradiction with how many youngsters see themselves, as will be discussed in outcome 4: many youngsters see themselves as not playing different roles for different audiences and always being themselves.

Material outcome 3 – Communication between generations is troubled

Methods used: dialogue, questionnaires

One of the dominant opinions by youngsters (aged 8-14) during the CDEI pilot lessons was that they did not think that adults would be as open (and as technically skilled) as young individuals were when playing the Augmented Reality game that was developed for that project. A majority thought that adults would either try to avoid being open or would just lie when answering the game's questions on online activities, friendship and love.[4]

During the game many youngsters revealed that even though they were open while playing the game they were hiding information about their online activities from their parents. Many said they tried to avoid being friends with their parents on social networks online and, when they felt that they had to be friends, would censor themselves or start a second, hidden account to communicate with their peers. Many stated that they wanted privacy from their parents and at the same time assumed that their parents – or any other adult – would not be interested in their online activities and would condone whatever it was that they did online. For many of them, the online world was their domain from which adults should stay far. Ofcom research (2015) found for the UK: "Close to half of 12-15s (47%) agree: "I should be free to say and do what I want online", with the remainder fairly equally split between those who disagree (28%) and those who are neutral or unsure (25%)."

The apparent reluctance by many youngsters to communicate with adults about their online activities as vented during the project pilots stood in great contrast to the willingness and need of the great majority of the participants in the pilots to talk about even the most intimate experiences they had online – see outcome 5. This situation was both intriguing and very relevant since one of the important outcomes of the large *EU Kids Online II* research (2011) is that the most effective instrument to further child Internet safety is an adult who spends time together with youngsters online and has conversations with youngsters about their online experiences. Therefore, communication between generations became a dominant theme in the projects following CDEI.

For the 2011 Dynamiczna Tozsamosc pilots a questionnaire was devised to test whether the sparse adult-youngster communication about online experiences was caused by trust issues. In the questionnaire youngsters (age group 11-14) were asked the same question as the first groups in CDEI: What would adults do differently when playing the Augmented Reality game? To that open question many students suggested as well that maybe adults would not be as open and honest and youngsters – a suggestion that was accepted by the majority of adults we asked later on at workshops and in questionnaires during conferences.

Another question in the questionnaire enquired what these youngsters would need to open up to an adult. All students answered that question by writing down a list of at least five criteria stating that they would need to feel trust, they would want to feel respected, that there should be a subject at

[4] Compare this to an outcome of a 2015 US research: "Honesty/integrity was the top quality sought in a boss, cited by 38 percent of respondents; this was followed by mentoring ability (21 percent)."

hand that interested both them and the adult, that they would want to have a guarantee that they would not be punished for what they had to say, or that their words would be used against them at a later stage, and that there would be time available to communicate. To the question what students would need to open up online most students entered only one or two criteria, all of them boiling down to: an Internet connection and the right app – for this effect of technology: see outcome 5.

During the 2012 Dynamiczna Tozsamosc project and the Dynamic Identity project (age group 11-18) a module was dedicated to the question: To whom would you go when you experience something negative online? The question was asked in class rooms in Poland, the Netherlands and Greece. It turned out that in every class there are one to three students who would go to their parents. When asked why, the dominant answers were: "because my parents are smart/ understanding", "because my father works in the ICT sector", and "because we are really close". Most students in every class room, on the other hand, stated that they would not go to their parents but would discuss their online experiences exclusively with their peers. No student mentioned that they would go to a teacher.

These findings are at odds with Ofcom research (2015) outcomes for the UK: "Eight to eleven year olds (94%) are as likely as 12-15s (91%) to say they would tell someone. The majority of both age groups would tell a family member (parent/ sibling or other family member), with younger children more likely than older children to do this (88% vs. 78%). Younger children would also be more likely to tell a teacher (18% vs. 13%). Twelve to fifteen year olds would be more likely than 8-11s to tell a friend (28% vs. 10%) or the website (6% vs. 0%)."

When asked why they would not go to their parents, many students explained that their parents were born in another era and therefore would not understand their problems. As one girl stated: "There was no WhatsApp when my mother was 15." Many others said that the bad language and the rough jokes they used online would be a reason for parents to feel offended so that, when there was a problem, their parents would only focus on the language and jokes, and not on the issue at hand. As a result, according to them, parents would probably punish them by forbidding them to go online for an extended period. And this they wanted to avoid. A third, often mentioned, argument was that the students' parents were simply not interested to hear about online experiences. A fourth argument was that, according to almost all students present during the pilots, adults played roles and were not honest. In their eyes adults mostly calculated. This argument will be looked into further in outcome 4.

In the Dynamiczna Tozsamosc 2013 workshops students (aged 14-18) were asked the following question: What would you want your parents to ask you about your online activities? About one third of the students answered by saying: "How can we help?" Others wanted their parents to ask them why they spend so much time online, or on a specific app, or why they publish so much about themselves. In conferences and workshops since 2013 the question was asked many times and the pattern of answers was always similar to the first round of answers.

During the Dynamiczna Tozsamosc 2014-2016 pilots (all age groups) instructors talked to parents who were convinced that their children were addicted to online gaming. When their children in a follow-up session were asked how much time they spend on average with their parents, not counting preparing homework for school, the answer by almost all youngsters was that they did not spend quality time with their parents at all. Their parents were either absent or busy working and even playing themselves on their smartphone, tablet or laptop.

In the Dynamiczna Tozsamosc 2013 workshop there was a focus on nonverbal communication. The reason behind this was that according to some researchers youngsters were losing the ability to interpret nonverbal cues because they communicate online so often. Ironically at the same time artificial intelligence is getting better in interpreting nonverbal communication.

Nonverbal communication abilities have no value online. But they are dearly missed (although the lack is somewhat remedied by emojis). Take for instance online magazine Mashable's take on the subject: "up to 65% of our communication is nonverbal — which means it can't be shared over Facebook. Larry Rosen is a psychology professor at California State University, Dominguez Hill who studies social media conversations. According to him, not only do we often feel disinhibited behind our screens, our bodies often simply don't know what's going on. "You don't understand their context, their feelings, their emotions, all you have to go on see is reflected in your screen," Rosen told *Mashable*. So when we can't see what the other person is thinking or feeling, our brains do what they do best — make sh*t up. "We imagine they're enjoying the conversation as much we are," Rosen said. We imagine they're enjoying this. ... When our brains don't know the context, they fill it in in self-serving ways — even when opposing evidence is tap-dancing naked in our face." This could be one of the underlying reasons for the preference many youngsters have for asynchronous, online communication as was seen in outcome 1.

For every hour that youngsters spend online half an hour of contact offline is lost (Nie/ Hillygus, *The impact of Internet use on sociability*, 2002). Youngsters do not practice nonverbal communication online – only offline contact would train youngsters in picking up nonverbal cues (John Mullen, *Digital natives are slow to pick up nonverbal cues*, 2012; Mark Bauerlein, *Why GenY Johnny can't read nonverbal cues*, 2009). Since youngsters have far less offline contact with their peers and their parents, youngsters do not learn to interpret nonverbal communication in detail and are therefore missing out on over half of human communication (Mullen, 2012; Bauerlein, 2009).

The results of this situation are potentially very serious. After having been online for longer periods of time, youngsters are observed to not look their conversation partner(s) in the eye in reality and to rather avoid interactive contacts (Mathiak/ Weber, *Toward brain correlates of natural behavior*, 2006). This is in line with outcome 1. In addition, some researchers do not exclude the possibility that the ability of youngsters to feel empathy is affected (Small/ Vorgan, *iBrain: Surviving the Technological Alteration of the Modern Mind*, 2008). And, according to Simon Rego, youngsters feel more threatened by reality – and react to this threat by showing more aggression.

At least some of these effects are noted by teachers. In an American survey in 2012 for instance 60% of the teacher participants stated that Internet causes students to have worse communication skills in real life (Common Sense Media survey quoted in: I. Quillen, *Teachers report mixed impact of digital*

media, 2012). It is also noted by Dutch employers (Jolan Douwes in de Volkskrant, 2015 and a news item on the Dutch commercial station RTL, 2015 – both items directly inspired by outcome 1).

In the 2013 Dynamiczna Tozsamosc workshop instructors noted that youngsters, possibly as a result of being online often, interpreted adult nonverbal cues associated with shame mistakenly as signals of lying. This interpretation of adults lying then was a showstopper for many youngsters to maintain an open contact with adults, especially since many see themselves as striving to be honest and avoiding to calculate or to play roles (see outcome 4).

In the project Dynamiczna Tozsamosc 2014-2016 adults are currently asked in a questionnaire what they would want to ask youngsters about their online behavior but find hard to ask. The outcome of this research is expected in the first half of 2016.

From the projects an image arises that youngsters would want to open up to adults about what they do online. This assessment is confirmed by danah boyd (*it's complicated*, 2014), a long-standing researcher of the online behaviour of youngsters: "By and large, the kids are all right. But they want to be understood." Inc. writes: "Once you get them talking about something they care about, it'll be impossible to get them to stop."

Unfortunately, youngsters are held back in their contact with adults because of their, sometimes faulty, assessments of adults and by a perceived lack of interest in the subject by adults. In 2016 more insights are to follow on the adult perspective on this subject and on adult shame.

What is known already now about parents from research (Ofcom, 2015) is that parents think that they possess enough knowledge to help their children to manage online risks (around four in five parents in the UK) while more than half of the parents go online to look for information online or receive information on how they can help their children manage online risks. In the US 64% of the parents is quite confident in their ability to keep track of their child's technology use. (USA – FOSI, 2014) 61% of parents think they know more than their child does about technology and being online, while 27% think their child knows more.

A (vast) majority of parents do not trust their children to stay online safely in the UK – in the US 93% of the parents belief that their child is somewhat safe online while 37% says their child is very safe online. Over 90% of the parents in some way manage their children's use of the Internet, both in the UK and in the USA. A majority does so by technical means.

Ofcom describes the parents who consciously do not use technical means: "In 2005 the main spontaneous reason given by parents whose child used the internet and who did not have blocking controls or software was that they trusted their child, given by 48% of parents of 8-11s and 79% of 12-15s. In 2015 the main reason, from a prompted list, given by parents who have heard of but do not use the tools asked about, is that they prefer to talk to their child and use other methods of mediation, given by around half of parents. However, trust is still very important, with around four in ten saying they trust their child to be sensible/ responsible." In the US 94% of the parents state that they have talked with their children about the pros and cons of Internet. According to 65% this is a

regular recurring conversation. The Economist notes that as result a generation has sprung up “that is more closely watched and less free to screw up.“

The parenting style that parents are closely watching their children is popularly called “helicopter parenting”. Julie Lythcott-Haims, who spent 10 years as the first dean of freshmen at Stanford University, criticizes the effects of this parenting style: “Working with the quote-unquote best and brightest, I was seeing more and more [students] who seemed less and less capable of doing the stuff of life. They were incredibly accomplished in the transcript and GPA sense but less with their own selves, evidenced by how frequently they communicated with a parent, texting multiple times a day, needing a parent to tell them what to do. I'd been scolding other people for five or six years. One night I started cutting my 10-year-old son's meat and realized I was enabling dependence on me. I could see the link between parenting and why my college students, though very accomplished academically, were rather existentially impotent.” Many parents, according to her, are unhealthily intertwined with their children, playing the role of their lawyer and doing their homework for them. Lythcott-Haimes wrote in *How to Raise an Adult*: "We want so badly to help them by shepherding them from milestone to milestone and by shielding them from failure and pain. But overhelping causes harm ... It can leave young adults without the strengths of skill, will and character that are needed to know themselves and to craft a life."”

Unfortunately, parents are in addition not very good at assessing their children as Belén López-Pérez and Ellie L. Wilson found. “Parents of 10- and 11-year-olds significantly overestimated children’s happiness, supporting previous literature on the parents’ positivity bias effect. However, parents of 15- and 16-year-olds showed the reverse pattern by underestimating adolescents’ happiness. Furthermore, parents’ self-reported happiness or well-being (reported 6 months later) significantly correlated with their estimations of children’s and adolescents’ happiness. Therefore, these results suggest a potential parents’ “egocentric bias” when estimating their children’s happiness.” This bias seems part of a more general human brain bias – attribution error.

What is also clear is that many parents, being overprotective as they are, are far from open-minded or positive about the Internet (f.i. Pew, 2012), at least when looking from the perspective of their children (f.i. 2 14-year olds in the Guardian, 2015). Parents are mostly worried and stress the dangers of being online (Mediawijzer, 2015). And thus their messages are not taken too seriously as the International Telecommunication Union explains: “An approach that deals only or largely with the negative aspects of the technology is very unlikely to be taken seriously by children and young people because hundreds of millions of them are already using it everyday and they therefore know a great deal about what it is and what it can be.”

Many youngsters, on the other hand, are very sensitive with regard to criticism. Inc. states: “They look out for each other and their colleagues, making sure that nobody gets hurt unnecessarily. Unfortunately, this trait sometimes impedes upwards growth that needs to happen. Millennials need to work toward taking things less personally and thinking in terms of the bigger picture rather than on an individual level. As important as people are, we also have to keep in mind that, sometimes, constructive criticism is the impetus needed to move things forward.” As a result, many youngsters close up, but not because they want to. danah boyd (*it’s complicated*, 2014) sums this situation up in the following scene: “As we were talking and laughing and exploring Mike’s online videos, Mike paused and turned to me with a serious look on his face. “Can you do me a favor?” he asked, “Can

you talk to my mom? Can you tell her that I'm not doing anything wrong on the internet?" I didn't immediately respond, and so he jumped in to clarify. "I mean, she thinks that everything online is bad, and you seem to get it, and you're an adult. Will you talk to her?" I smiled and promised him that I would."

Material outcome 4 – Youngsters claim to always be themselves

Methods used: dialogue, questionnaire

In the project Dynamic Identity (age group 11-18) modules were prepared in which identities were presented as a set of roles we play. The modules were inspired by sociologist Erving Goffman (*The presentation of Self in everyday life*, 1959; *Frame analysis*, 1974). Highlighted in the modules were first of all, the difference between information given – information we consciously share about ourselves – and information given off – information about ourselves that we unwillingly share or that others share on us and secondly, the idea that our performances differ from situation to situation (we play different roles) and involve different audiences per role. Mixing audiences is seen as a bad idea in this theory because this undermines the credibility of one's performance. An example given in the modules is of a girl, having a cool reputation at her school, who is visited at school by her mother. The mother brings with her the girl's favourite teddy bear. For the girl this act by her mother means embarrassment: the audience of one role (school peer) is confronted with evidence of another role (sweet daughter).

In the first class room where the modules were presented students laughed with understanding about the example of the girl. When asked what would happen if one of their mothers would bring a favourite, cute toy of them to school, many shouted that that would be a disaster, horror, something terrible. But, when hearing about the theory behind the example, many were loudly voicing their disagreement. They argued that they were not playing roles; they were always the same person. Then the whole group of participants was asked one-by-one whether they agreed or disagreed with the statement that different situations required different roles. Not one student agreed. At the end of the multi-session workshop, in the final questionnaire, students were asked to self-report on how much they had learned during the workshop about identity-related aspects. In the questionnaire the theory of identity as consisting of roles received the lowest score by students, either because they had not learned too much or because they did not agree.

The first presentation of the theory took place in the Netherlands. Then three more classes in the Netherlands followed, with the same result. The Dynamic Identity project partners then brainstormed about this outcome and decide to change the phrasing. No longer would playing roles be presented as equalling identities but rather as a theory on self-presentation. The underlying idea was that students might already have assumptions on identities that collided with the presented theory while they might not have assumptions on self-presentation or at least not to the extent that these collided with the theory.

The differently phrased modules were then presented in Greece and Poland and then once more in the Netherlands – but with the same result as during the first pilots. Many participants loudly voiced their disagreement. When asked one-by-one whether they agreed or disagreed with the statement that different situations required different roles, not one student agreed. And in the questionnaires the theory about roles, this time presented as a theory of self-presentation, again received the lowest rating.

When students in the Netherlands, Poland and Greece were confronted with the fact that they probably behaved in one way in the class room and in another way at home, individual students

explained that they only censured themselves at school because they did not want to risk punishment. So, as a result, they would refrain from saying certain things or doing certain things, but they would not say one thing at school and something else when they were with friends, nor would they do different things at school and with friends. When asked one-by-one, all students in all three countries agreed.

For many Dutch students this was also the reason why they did not react to teachers who would ask them in a friendly way to change their behaviour during normal class sessions but mainly reacted to threats of punishments.[5] This specific subject was not touched upon during the Greek and Polish pilots.

According to Dutch research (Mediawijzer, 2015) children try to be honest online. When asked whether they would show a product on their vlog, even when it's crappy in their eyes, 39% says yes and 28% says no. But the majority of those saying yes would give their honest opinion. The majority of those saying no would not show it because it is a crappy product.

What was observed by instructors, though, is that youngsters do say different things in different situations. If a teacher employs traditional transmission didactics then students are "playing a game of guess what's in the teacher's head" in the words of Dylan Wiliam (*Embedded formative assessmen*t, 2011). Students in that situation try hard to say what they think the teacher wants to hear, as was observed during the CDEI pilots – see outcome 5. But when students engage in a type of interactive didactics they open up more often and seem less afraid to say things that are not what the teacher expects to hear.

Typically at the start of any pilot session students would repeat to the project instructors what they thought that the instructors wanted to hear, for instance: "I never accept people whom I do not know in real life as online friends" or "I talk with my parents about my online experiences" or "I spend quality time with my parents" or "we have a very good quality program at our school for online safety". But, in the right setting, many students would open up within fifteen minutes and tell the instructors whom they had never met before that they did communicate online with people they never met in real life, that they were hacking sites or were using anonymizers online and that they were experimenting sexually online – see outcome 5. This all to the amazement or embarrassment of the teachers (and sometimes parents) present.

When confronted with this change in behaviour and the difference between what they stated initially and after a while many students denied that they said anything different. Rather they explained that in situations in which they do not feel trust they do not say anything. This led the instructors to understand that not saying anything may equal saying that what is expected.

[5] Compare this to Jonathan Haidt (*The righteous mind*, 2012): "we care more about *looking* good than about truly *being* good. Intuitions come first, *strategic* reasoning second. We lie, cheat, and cut ethical corners quite often when we think we can get away with it".

This might be an explanation for why many youngsters claim they do not play a role. When conforming to what is being expected equals not saying anything then roles are on the same level as external, non-relevant behaviour.

The denial by youngsters that they play roles at first sight seems to affirm the general human need for consistency of one's behaviour and identity that was discussed in outcome 2. This would then put the apparent lack of consistency in the observed identity narratives and their sensitivity to the context and audience to which they are put into words (see outcome 2) in a difficult perspective. But, a coincidental measurement in a questionnaire sheds a different light on the outcome.

In a questionnaire following the viewing of the two recordings of the participants' answers to the question: Who are you until now in the Dynamic Identity project (see outcome 2) three questions were asked:

- Which of the two videos do you consider the better one? Please explain why.
- What new things did you learn about yourself when watching the two videos?
- What did you do differently in the second video when compared to the first?

All students (age group 11-18) provided detailed answers to questions 1 and 3. While answering question 1 some stated that they liked their first video better because they were more spontaneous and more themselves. Others stated that they liked the second video better because now they knew the question and could prepare for an answer so that in the second video they expressed themselves more confidently and more clear.

These answers made it sound as if the participants had a feeling of who they were but had never put this in words. For some the forced setting produced better results putting in words who they are while for other the controlled setting produced better results. This could be the reason for outcome 2: while individuals do not have a predefined identity narrative ready in their heads, they do seem to have a feeling, a hunch, an intuition of whom they are and seem to use this as a measurement frame to measure against their own attempts to put their identities in words.

Answers to question 3 were very detailed too. Participants would describe in great length what they did differently in the second video and why they did this differently. But, to question 2 all participants answered: "nothing". Even when asked to stand-up one-by-one and repeat their answer all said: "nothing". Some participants used a defiant tone when saying it, others a more apologetic tone and yet others a more neutral tone, but all said the same word nonetheless.

To the instructors at first this seemed paradoxical. How could it be that individuals see a difference between two states, can explain why these states are different, and can even chose between these states, then say that there occurred no learning in between these two states? And then it dawned on the instructors that this was probably it. For the participants these states were not hierarchically connected as a before-state and after-state, as was the case for the instructors. They were not linked as a state in which they had not yet learned something and then they had learned something but

rather just saw the two states as... two states.[6] In the one state they behaved in one way and in the other state they behaved in another way. Because of their meta-assumption about whom they are they were capable of judging in which state their self-presentation was more and in which state their self-presentation was less in accordance with this meta-assumption. But, these states were not better or worse in themselves. They were only reactions to outside conditions, not representations of inner change or growth. It seemed that while differences in states were acknowledged the difference in what they said was not. The inner evaluation of what happened differed from what was observable from the outside.

Returning to the subject that youngsters say that they do not play roles, it might – hypothetically – start to make sense. Playing roles presupposes that an individual wants to fit in an externally defined role and tries to adapt to its requirements. One can then either cynically adapt one's self or one can adapt one's self with good will but in the end all role-playing involves a degree of calculation. If one, in addition, has a clear perception of whom he or she is in the form of an identity narration then the calculation involves establishing per situation how much and which parts of one's identity one needs to involve to play a role and how much and what one needs to fake.

If, on the other hand, one does not have a clear image of one's identity, but only a meta-conception, then one cannot calculate with one's identity, only show more or less of it in situations – even if they look differently from the outside – exactly as participants described above. One then tries to be oneself as much as possible and in situations in which that is not possible one follows the frame at hand without having the feeling that one is playing a role because one does not feel involved. In this hypothetical interpretation there also is no learning involved because one's meta-conception of whom one is and one's phrasing of one's identity do not involve perceived evolution. One's meta-conception of whom one is only evolves subconsciously, if at all, while one's descriptive phrasing is only about showing more or less of one's identity in given settings.

An additional strong indication that youngsters perceive identities like this was found by the instructors while conducting dialogues with students during the Dynamiczna Tozsamosc project 2011 and 2012 and the Dynamic Identity project. In Poland many youngsters declared that when they met someone new offline or online that they were not sure beforehand what the other person would be like. They stated that they could not know whether the other person would be like them, or not. This is a new phenomenon for Poland where members of older generations expect by default that when they meet someone new, this new person will think exactly as they do. And, they are more tolerant towards otherness – a trend that exists worldwide. Research (2014) in the USA for instance showed

[6] See f.i. Philip K. Dick. *The last interview and other conversations*, 2015: "The big turning point came when I was nineteen. And that was a really serious matter. I woke up one day and I looked around at the world. And I said, Causality does not exist. It's an illusion. And I talked with a guy who was in the philosophy department. I said, "I suddenly realized it was all an illusion. Because, an effect follows something, B follows A, we think A caused B. But actually it just follows it. It's a sequence. A sequence like a sequence of integers. They're not connected."

that 73% of Generation Z respondents is in favour of same-sex marriages, 74% supports equal rights for transgenders and 73% believes in a racial diverse society.

The otherness that is presupposed to be an option for others is also surprising because youngsters currently look much more alike than youngsters of previous generations. It is rare to meet in class rooms youngsters that have an outspoken different outlook. The Economist sees the trend of a "rising temperance among the youth": less sex, alcohol and drugs. "Television stations aimed at young people have dropped programmes that glamorise rebellion and high-living, says Christian Kurz, of Viacom, a media company which owns MTV."

Maybe, as danah boyd seems to think, the outspoken parts of youngster identity have migrated online where they can be member of fringe groups and niche communities.

Accepting for the moment the hypothesis that youngsters have no conscious concept of whom they are and do not want to fit in externally defined roles but only decide whether to show more or less of what they consider, on a non-language level, to be themselves, then Bauman's liquidity takes on a new dimension.

Bauman (*Identity*, 2004; *Liquid life*, 2005; *Liquid times*, 2007) presupposes that individuals in liquidity change all the time, without having the option of solidifying one's identity. Taking as a starting point the theory that we all have an identity narrative that is consolidated to an ever growing extent, as well as the theory that we all play roles that are situation-dependent, then this ever changing liquidity is a very painful and fearful process leading to existential anxiety. If, on the other hand, the hypothetical situation that was sketched above is taken as a point of reference, then the liquidity is a given rhythm that sometimes requires one to show one's self more and sometimes requires to show one's self less. Both in reality and in one's identity then no major changes are expected that would indicate an evolution in whatever direction. This would mean that liquid reality is experienced by many youngsters but does not leave significant traces on their self, only possibly on their trust in their surroundings.

Nevertheless it turns out that traces are left by liquid reality, just not in a Goffman-way. Youngsters do not change temporarily as a result of the requirements of a situation, but many change dynamically in interaction with various situations. They seem to take bites out of reality[7] and mix the elements they select out of reality into a dynamic whole that is in a permanent flux. This way they are always themselves, always authentic, even though they permanently change. Their identities then are not a given entity that can be formulated when prompted – see outcome 2 – but are a fluid way to interact with reality.

[7] See f.i. Jeremy Finch: "we found that Gen Z actually has what we're calling highly evolved "eight-second filters." They've grown up in a world where their options are limitless but their time is not. As such, Gen Z have adapted to quickly sorting through and assessing enormous amounts of information. ... Once something has demonstrated attention-worthiness, Gen Z can become intensely committed and focused. They've come of age with an Internet that's allowed them to go deep on any topic of their choosing and learn from like-minded fans."

In the mix that are their identities, not just positive elements are incorporated by many youngsters, but also negative elements, as was found during the Dynamic Identity pilots. When asked to draw a selfie that should never occur, about half of the youngsters in the Netherlands drew themselves in front of the then recently downed airplane MH17 or in front of a scene of IS beheadings. During the workshop the downed plane was only mentioned once in passing while no word was said about IS. These images were not drawn indifferently. When asked whether they wanted to show their drawings to others and hang them on the wall, a majority of the participants asked for permission to destroy their drawings.

It seems that, although many youngsters seem to slide through liquid reality, it does lead to anxiety. The mix that is the identity of many youngsters does not have an internal consistency, as was seen in outcome 2. While this helps these youngsters to navigate through their fast changing surroundings it also denies them the possibility of having deep reflections that stem from the confrontation of a carefully constructed self with the reality that surrounds them – see outcome 6. While youngsters take in all kinds of elements, they have no hook to hang these elements on. It is as with their technology use – see outcome 6: technically many youngsters are extremely skilled but they lack critical reflection.

Whereas many adults, according to Bauman, are scared to become superfluous and need to run ever faster to at least stay at the same place, the anxiety of many youngsters looks different: they seem to look for frames of affirmation and trust around them as potential buffers against the impact of the negative elements of liquidity.

Material outcome 5 – New technology is a key to open up youngsters

Methods used: dialogue, exercises

During the first CDEI pilots (age group 8-14) it was found that the Augmented Reality game that was developed for that project had a profound effect on students playing the game, that is, under the precondition that it was played while employing a form of interactive didactics. When the game was once, by coincidence because a teacher had an off-day, played while employing the traditional top-down transmission type of didactics, the game did not render any specific effect. This coincidental observation led to the hypothesis that new technologies without a change of didactics have no relevant impact on youngsters present in a class room. New technologies seem to lack the power to overturn the effect of the transmission model, which means that, in the words of research education researchers and innovators Paul Black & Dylan Wiliam (*Inside the black box*, 1998) "little, or no, worthwhile learning" takes places. After having analyzed the outcomes of a vast body of researches Black & Wiliam conclude that there is a "wealth of evidence that this transmission model does not work, even by its own criteria". Wiliam restates this claim in his later work (*Assessment for learning: why, what and how*, 2009; *Embedded formative assessment*, 2011). Unplanned traditional teacher implementations that took place during the Identifeye project (age group 8-14) confirmed the hypothesis.

When the Augmented Reality game was played during the CDEI pilots while implementing an interactive type of didactics, be it project learning-based (PBL) or otherwise, a large majority of the youngsters present opened up profoundly. During one pilot lesson in the Netherlands for instance students (aged 12) started talking about their sexual fantasies and sexually oriented online activities. In another lesson a Dutch girl (aged 11) stated that she does not meet up with strangers any more whom she had gotten to know online. These are anything but standard topics in the class room, to put it mildly.

In subsequent pilots in Poland and Greece the pattern was repeated. The use of new technology was followed by youngsters opening up profoundly and for instance being able to endure otherwise unpleasant situations such as confrontations with themselves in front of the whole class[8] – see outcome 2.

This effect of technology on youngsters is extensively discussed by Sherry Turkle (*Alone together*, 2011). As early as the mid-1970s the effect was noted and dubbed "the ELIZA effect". The effect was named after Joseph Weizenbaum's program ELIZA "that engaged in dialogue in the style of a psychoterapist." The program did not understand anything it was told, it just would "take strings of

[8] This intimacy with technology, which is elaborated below, is a strange phenomenon. Notwithstanding the fact that youngsters grow up surrounded by technology, technology in itself is very complex. This is rarely appreciated though. Samuel Arbesman notes: "We are awash in incredibly complex technologies, and yet most of us take them for granted." He gives an example of a man who expresses his awe for mechanical watches as opposed to smartwatches that according to him contain "just a chip".

words and turn them into questions or restate them as interpretations". Turkle continues: "Weizenbaum's students knew that the program did not know or understand; nevertheless they wanted to chat with it. More than this, they wanted to be alone with it. They wanted to tell it their secrets."

Turkle describes how children "describe robots as alive enough to love and mourn". She worries about the affection that children – and older individuals – display towards artificial intelligence entities: "Dependence on a robot presents itself as risk free. But when one becomes accustomed to "companionship" without demands, life with people may seem overwhelming. Dependence on a person is risky – it makes us subject to rejection – but it also opens us up to deeply knowing another. Robotic companionship may seem a sweet deal, but it consigns us to a closed world – the lovable as safe and made to measure."

Turkle's line of thinking has led analysts and researchers assume that this is why youngsters prefer asychronous, online communication to real life communication (see outcome 1). Technology, in this line of thinking, provides youngsters with a shield to lead a risk-free life. The price they seem to pay is that of not being able to know another person "deeply" – something that seems to be confirmed by the falling levels of nonverbal communication skills by youngsters (see outcome 3). This situation would be deeply tragic since youngsters do want to talk – see outcome 3 – probably do look for trust and affirmation – see outcome 4 – and do think that contact in real life is more important than contact online – see outcome 1.

In the projects Talking about Taboos (all age groups), and Dynamiczna Tozsamosc 2014-2016 (all ages) pilots took place in which interactive didactics was implemented, and that concerned the subject of new technologies but did not always involve the actual use of new technologies. During these pilots the results were very similar to those in which interactive didactics were employed and new technologies were actually introduced to the participants.

When in Identifeye (age group 8-14), on the other hand, teachers implemented interactive didactics and employed a new technology, students did open up, but not to the degree of the earlier pilots. A vast majority of students was very enthusiastic about the lessons and stated that they would strongly encourage these types of lessons to be repeated, but they did not seem to show the same trust levels as during the pilots.

If we'd accept the premise that youngsters think they show more or less of themselves according to the circumstances – see outcome 4 – and that this decision involves trust then technology in itself seems to be a factor to help them decide to open up more (the ELIZA effect) but only under the right trust circumstances (interactive didactics). Similar circumstances were described by youngsters in a questionnaire when asked what was needed to open up to an adult – see outcome 3. But even more so, youngsters open up online.

But youngsters did not open up as much to their regular teachers as to the instructors. This could have to do with the fact that teachers are present all the time, not just during the workshop. But this argument is at odds with the setting of the class under patronage within the framework of the project Dynamiczna Tozsamosc 2014-2016. In this setting the instructors have committed themselves

to be regularly present in the class room for a period over three years. And in this setting students open up ever more, rather than closing up. According to this logic, students should rather not open up to strangers but rather to their own teachers.

Another explanation for the observation that youngsters open up less to their own teachers is that their teachers are part of a hierarchical power structure while the instructors are far less so. This might a factor. But a far more powerful explanation seems to be that the instructors are fluent in online communication, at least on a par with the students, while their teachers were only taking their first steps in this field.

Could it indeed be that being in the know about online communication is like a code that one belongs to the club of online natives? Is it possible that understanding and accepting new technologies – in combination with interactive didactics – erases (nearly) all trust barriers between instructors and youngsters? Is it not just new technologies that open up youngsters but also adults who feel at ease with new technologies? This would explain the success of representatives of the police and other law enforcement organizations in their contact with youngsters (see for instance this story of a policeman pioneering with this in Canada, 2012). And, it would help to explain why youngsters at the project pilots would at first give the answers that they thought that were expected from them, or just remained silent to the instructors, and would only open up after a while. Several students told at a later stage that initially they felt the pilots would be more of the same and that the instructors would prove to be the next adults who pose as being different but would turn out to be exactly the same as always. But students said that after a while they changed their mind and opened up and gave their trust.

This hypothesis would also help to understand why some youngsters turn to their parents in case of problems online and other youngsters do not – see outcome 2. It would also bring more meaning to the answer of participants that what they needed to open up is an Internet connection and a relevant app only. Because in the question in the questionnaire there was no mention that it concerned having online communication with peers only. This might have been assumed by the participants, because of their assumption that the Internet is for young people only, but the question in the questionnaire followed the question on what was needed to open up to adults, thus a priming effect that this question as well concerned adults could also be expected.

The thought that adults who have knowledge of online communication and of new technologies have something similar to a password to enter the world of youngsters, seems to make sense. If new technologies are part of the communication grammar of youngsters then anyone knowing that grammar can speak their language, at least up to a certain degree. A shared communication grammar then probably leads to the assumption among youngsters that a shared frame to interpret situations also exists and, therefore, a safe situation exists that is defined by trust. Adults understanding online communication would thus be perceived as not focusing on bad language or rough jokes and would be seen as interested in that what happens online. Thus, whereas some researchers see new technologies as the great divide between generations because youngsters can hide behind it, knowledge of new technologies could very well also be the bridge that enables a trusting communication between generations.

This hypothesis would be in line with the experience of the instructors in all of the projects. The hypothesis is also in line with the assessment of Dutch youngsters (2015 CBS research) of social

media. Whereas nearly 40% sees social media negatively impacting their ability to concentrate, 25% percent experiences a negative impact on their night's rest and 20% on their achievement at school, only 4% evaluates social media as negatively impacting their contact with family and friends while a majority (52%) sees social media, on the other hand, positively impacting their contact with family and friends. If the line of thinking that was sketched above applies, then this positive impact can be directly related to the effect of social media and adults being in the know about them.

Material outcome 6 – Youngsters are digital naives

Method used: dialogue

Although online communication is important to youngsters, and proficiency in online activities might be an important element in building trust relations – see outcome 5 – this does not mean that youngsters are fully technologically proficient themselves, even though they might think so. In the Ofcom (2015) research it was found that a majority of youngsters in the UK cannot distinguish search engine ads from organic search results, even though these ads are marked as 'ads' (against 10% for for adults). Around 40% of youngsters in the UK believes either that "if a search engine lists information it must be truthful" or does not think about whether the results are truthful or is unsure whether this information is truthful. Over 50% of youngsters polled do not know that vloggers might be paid to give positive reviews. Only one-third of them is capable of managing their privacy for online media and only thirty percent knows how to report something online they find disturbing. According to Dutch research (Mediawijzer, 2015) 33% of children does not check shocking information; 50% shares shocking information, also if it's unchecked. On the bright side, only a small minority (17%) thinks that all information online is true, and only 4%-9% (age group 8-11 and 12-14) believes that all information on social media is true. And, 70% of 12-15 years olds checks websites they have not before in one way or another. danah boyd (*it's complicated*, 2014) writes: "Just because teens are comfortable using social media to hang out does not mean that they're fluent in or with technology. Many teens are not nearly as digitally adept as the often-used assumption that they are "digital natives" would suggest. .... As sociologist Eszter Hargittai has quipped, many teens are more likely to be digital naives than digital natives."

Also during the pilots the lack of critical reflection on new technologies and online media among youngsters was apparent. A module about upcoming new technologies in the Dynamic Identity project caused anxiety among a significant part of the students aged 11 to 14. In the Netherlands students from a group asked whether new developments were really that scary; colleagues from a previous group had already informed them about it in detail. In Poland a couple of boys admitted not having slept at night because of the module. And in Poland a 16-year old girl exclaimed that this was not a world in which she would want her future children to live. Still, all the module showed was Augmented Reality and Virtual Reality apps, brain interface applications, Internet of Things applications and, yes, one pessimistic video on the possibility that future body augmentations might be hackable.

The anxiety that many students experienced during the module might be caused by the fact that trusted adults did not show a positive-only image of new technologies and thereby undermined the image of new technologies as an agent of hope and affirmation.

The insights and level of self-reflection shown by most of the students in the Dynamiczna Tozsamosc pilots in 2011 and 2012, Dynamic Identity and Identifeye were low. Most students appeared to have never given thoughts to questions such as: If you are killed why playing a game, how does this affect you? And what if you are humiliated in a game? Or raped? How would this change when you could

upload a 3d-version of yourself to a game? Or a hologram? And what if you are printed in 3d, how much of you is in the resulting statuette?

Also on visual information, the most dominant form of information both offline and online, youngsters turned out to have little knowledge and reflection. During the Dynamiczna Tozsamosc pilots it appeared that no participant had any knowledge on the subject of film grammar. No one was familiar with film shot sizes or with the impact of different types of lighting or backgrounds. In a photo exercise, for instance, students (aged 11-14) were asked to make a selfie by means of a laptop. The instructors had directed the camera in such a way that a dustbin would be visible in the background of the selfie, or some rubbish. Not one student noticed that on the selfie they took these objects would also be present. They just clicked the start button of the selfie application and posed.

Thus, modules on film grammar were introduced in the Dynamiczna Tozsamosc project 2012 and the Dynamic Identity project. One of these modules concerned itself with elements of film grammar and another module analyzed selfies as self-presentation within the framework of visual analysis.

Knowledge about the subject of profiling among youngsters was also low. Profiling was a major theme in the Dynamic Identity project. Only one class in Greece knew about profiling, as well as a few lone individuals in the other class rooms in Greece, Poland and the Netherlands. Most knew that their online behaviour had something to do with the types of advertisements they would meet online later on, but almost no one knew how this exactly worked. The working of cookies, fingerprinting and profiling algorithms was unknown to most and therefore hardly any participant had ever thought about the potential impact of profiling, for instance on their own future or on the essence of our self. But, the reflections came quick, especially after having seen how many advertising agencies track us in real-time by means of the Lightbeam plug-in for the Firefox browser.

When hearing about the workings of profiling most students reacted angry and frustrated at first. But then a small majority decided very fast that it did not concern them. Their motivations ranged from the famous “I have nothing to hide” to “it only helps me find things I like better”. A minority of the students told the instructors that after some thought they were not surprised because they somehow felt being watched. Still, many students were surprised that anybody would be interested in them in the first place.

Ofcom research results (2015) seem a bit more positive about the knowledge of youngsters in the UK: “more than four in ten 12-15s (45%) are aware of personalised advertising, in that they are aware that some people might see different adverts to those that they see. Fewer 12-15s (18%) state that everyone would see the same adverts, with close to four in ten unsure (38%). As such, the majority of 12-15s who go online are either unsure or give the incorrect response (55%).” But, when taking the pilots’ experiences in consideration, one should doubt whether the 45% that was found to be aware of personalized advertising actually knows how it works.

The indifference that many students displayed in their second reaction in the pilots should not be interpreted as indifference per se about the subject but rather as a defence mechanism to cope. In the Ofcom research (2015) 23% of 12-15 year olds indicated that they did not want anybody to see

what they are doing online, while 58% would only want their friends to see this and nobody else. Profiling is to be seen as a serious violation of their preference. (For data on the general population's view on privacy online, see Pew research, 2013.)

When asked whether they would film an incident at school according to Dutch research (Mediawijzer, 2015) 40% of 9-12 year olds would not film it because a majority (51%) of them do not like to be filmed themselves while 30% would film it, but 77% of these would first ask permission of the individuals involved to publish it. Only 17% would film a disturbing incident at school and ony 8% would share it.

As was stated before, many youngsters cannot comprehend why people and organizations unknown to them would be interested in them. As was mentioned in outcome 3 most youngsters want to be able to feel free online to do what they want to do. To them the online sphere is a sphere of trust between those whom one knows and their friends and, maybe, the friends of their friends. While for younger children the amount of friends, followers and likes is a major issue (Ofcom, 2015) for teenagers online contact rather is about having trusted relationships with friends and acquaintances. In this sense the online environment is nothing else than the hiding places for contact that youngsters of all generations have looked for (see f.i. dana boyd, *it's complicated*, 2014).

What has changed, though, is that these hiding places are monitored by companies and authorities, even by means of tapping our webcams, and by parents who are turning into mini-NSAs by means of spying apps. Guardian journalist Rory Carroll reflected in 2014 on wearables that make exact tracking by parents of their children possible: "I say, God help them. What sort of childhood is it with every move tracked, scrutinised, logged, judged? Where you cannot wander, try something new, be spontaneous – be yourself – without issuing a beeping alert from wearable, connected technology?"

Instead of building trust and communicating with youngsters many adults check on them. Trust is built, as Anthony Giddens describes (*Modernity and Self-Identity*, 1991), by a child that is learning that if parents leave, and then are invisible, that this doesn't mean that they are gone forever. Over time the child starts to understand that the parents will return and will become visible again. Maybe it is time for adults to learn this kind of trust again too with regard to their children and not plan their children's schedule up to the point that children have no time for anything spontaneous and online can meet online, where they are controlled again.

The given that youngsters are not very reflective about what they do will not be solved by more online spying on them. As was noted in outcome 3 rather conversations with adults about what they do online and shared time online can increase their online safety, which is what parents are aiming for.

Material outcome 7 – Multitasking interferes with youngsters' identities

Method used: analysis

When the instructors were preparing for their first pilot sessions of the project Dynamic Identity in the Netherlands they were warned by teachers that the maximum attention span of the students in the class room would be ten minutes. As the instructors implemented their lesson plans it turned out to be not that bad but it was obvious that many students were jumpy, fiddling around with things and noisy. Students in Poland and Greece were much more disciplined but still little nervous movements that were growing in intensity over time were displayed also there by many students.

Larry Rosen (2012) observed American students for fifteen minutes after they had been told in a research setting to "study something important, including homework, an upcoming examination or project, or reading a book for a course". Already within two minutes most students started to be distracted by social media messages. And at the end of the 15 minutes period the students had spent on average 65% on their studying and 35% on social media messages. MindShift asked Rosen for a comment: ""We were amazed at how frequently they multitasked, even though they knew someone was watching," Rosen says. "It really seems that they could not go for 15 minutes without engaging their devices," adding, "It was kind of scary, actually.""

Multitasking while studying has become normal. A study (year unknown) showed that 80% of the students in the US even text in class rooms (62% in the Netherlands), also when this is strictly forbidden. 51% of the US respondents admitted that they were "distracted from class material" when texting. 49% felt guilty about texting in the class room when it is not allowed. Another study (2010) showed that American undergraduate students use their laptop during lectures for 42% of the time for activities that are not related to the course. It seems that our brain wants to check Facebook every 31 seconds. According to Evernote's Phil Libin our tech use will only become more frequent: "we'll be having sessions of 10 seconds each, a thousand times a day." Research institute Statistic Brain published that the average attention span in 2015 was 8.25 seconds.

Daniel Levitin (*The organized mind*, 2014) writes: "Although we think we're doing several things at once, multitasking, this has been shown to be a powerful and diabolical illusion. Earl Miller, a neuroscientist at MIT and one of the world's experts on divided attention, says that our brains are "not wired to multitask well... When people think they're multitasking, they're actually just switching from one task to another very rapidly. And every time they do so, there's a cognitive cost in doing so."" It appears that it costs us 15 minutes to focus on a new task. Levitin continues: "Multitasking creates a dopamine-addiction feedback loop, effectively rewarding the brain for losing focus and for constantly searching for external stimulation." The dopamine feedback loop might be a partial explanation for outcome 5 that many youngsters open up easily when using technology.

The effects of multitasking are negative according to Levitin. The information learned during multitasking goes to the wrong part of the brain. The constant switching of tasks wears our brain out quickly which makes us feel exhausted, disoriented and anxious.[9] It causes short-term memory loss,

[9] In addition, the effect of checking our phones and other screens after 9 PM is potentially disastrous according to Daniel Siegel: https://youtu.be/_1V0rDSTC9I.

and, by implication long-term memory loss because if information isn't stored in the short-term memory it cannot be transferred further. This is even more true for youngsters than for adults because, according to a study (2015), "brain functions which allow people to store overlapping inputs do not properly develop until adulthood. So teenagers simply cannot keep as many thoughts in their head as adults." Multitasking leaves the multitasker in a situation of exhaustion, disorientation and anxiety. Therefore, there is simply is no energy left in the brain to reflect on all its activities. Inc. adds: "Millennials find it really hard to direct all of their attention to one thing at a time. ... without the ability to live in the moment and finish the task at hand, there is no way to develop the new, creative ideas Millennials are often so excited about. ... In addition to showing a lack of focus, multitasking decreases our ability to perform exceptionally at any one task. ... Being the jack-of-all-trades unfortunately makes you the master of none." This description of the effects of multitasking seems to provide a solid explanation for outcome 6 that many youngsters are not reflective on their online activities.

The reason why youngsters seem to start to multitask in the first place is FOMO, the Fear of Missing Out, according to Rosen: "Young people's technology use is really about quelling anxiety. They don't want to miss out. They don't want to be the last person to hear some news, or the ninth person to 'like' someone's post."

Multitasking and short attention spans are thus provoked by the frequent checking of social media (although some researchers say they are just the symptom of it). In social media short communication messages are the standard. Twitter limits the messages one can send to 140 signs. Facebook only shows a small dialogue box to type in one's status update. The average length of an SMS is 92.45 signs. The average length of a chat message is probably even smaller. A popular trend in online communication is towards ephemeral messaging: messages that are to selfdestruct after reading. Snapchat is the most visible exponent of this trend but even Facebook is experimenting with it.

Social media communication between individuals rarely takes place by means of delicately phrased arguments that are only given out after a period of reflection. This communication typically consists of short chat messages or of prefabricated memes. According to Brandwatch "memes are meant to be funny of sarcastic" in order to grab our attention. Trolling messages function in the same way. They are to shock and awe by means of concise wording that is both threatening and sarcastic. Instead of using arguments in a discussion trolling messages are to disrupt and discredit. The other side is to be cowed into silence by means of the messages.

The short social media messages seem both cause and result of multitasking and the resulting short attention span. They are short but arrive very frequently. As Levitin noted, the constant switching between tasks wears the brain out. According to him, "[a]ttention is a limited capacity resource." Daniel Kahneman (*Thinking, fast and slow*, 2011) agrees. In his opinion our brain can only handle a limited amount of active thinking, a mode of thinking he calls System 2. He explains: "System 2 allocates attention to the effortful mental activities that demand it ... The operations of System 2 are often associated with the subjective experience of agency, choice and concentration." Kahneman claims that a general "law of least effort" applies to cognitive activities: "The law asserts that if there are several ways of achieving the same goal, people will eventually gravitate to the least

demanding course of action. In the economy of action, effort is a cost ... Laziness is built deep into our nature."

American research (2014) shows that even doing nothing comes at a cost. Rather than being alone with their thoughts for 6 to 15 minutes in a room, 25% of the women and 67% of the men in an experiment chose to give themselves an electric shock instead.

The default human mode according to Kahneman is System 1 though. This system "runs automatically". "System 1 continuously generates suggestions for System 2: impressions, intuitions, intentions and feelings ... When all goes smoothly, which is most of the time, System 2 adopts the suggestions of System 1 with little or no modification. You generally believe your impressions and act on your desires". Kahneman continues: "If endorsed by System 2, impressions and intuitions turn into beliefs, and impulses turn into voluntary actions."

The flood of social media messages is dealt with by System 1 but also noted by System 2. System 2 is incapable of thoroughly checking the messages and the outcomes of the other activities we do at the same time. Thus, not much learning takes place in the sense that not much information is stored in our short-term memory. But, the messages do leak through to System 2 because, as Kahneman noted, System 2 adopts the suggestions of System 1 with little or no modification in routine situations. The short messages therefore have a short-cut to becoming beliefs and steering our voluntary actions. But they do not constitute one, consistent whole. They are diverse and fragmentary. As a result, the beliefs that rest upon them are more diverse – see outcome 4 – and more fragmentary.[10] The control that we try to gain by using asynchronous means of communication (see outcome 1) is not so much aimed at having the time to write long, consistent messages but rather just aims to empower our feeling of having control. When everything is changing fast, when everything is turning liquid – see outcome 2 – and we multitask, then the feeling of being in control is a rare and valuable event. This might be an important underlying reason for outcome 1 that youngsters prefer asynchronous contact over synchronous contact.

Wired adds: "In 2012, Elon University worked with the Pew Internet and American Life Project to release a report that compiled the opinions of 1,021 critics, experts, and stakeholders, asking for their thoughts on digital natives. Their boiled-down message was that young people now count on the internet as "their external brain" and have become skillful decision makers—even while they also "thirst for instant gratification and often make quick, shallow choices.""

The instructors also noted during all the projects that students do not seem to have too many dreams left. They are mainly focused on reality.[11] Howard Gardner & Katie Davis (*The app generation*, 2013) have dubbed the current generation therefore "the app generation": "they've come to think of the world as an ensemble of apps, to see their lives as a string of ordered apps". These apps are the answer, according to Howard, to all questions "except the important ones".

[10] This is a trend that already started with Millennials, see f.i. Millennials' political views make no sense (2014).

[11] Generation Z is also called "the 'reality check' generation": "They're not exactly bubbling over with youthful optimism."

According to Howard & Davis youngsters give (quoting a respondent) “pragmatic, achievable answers” situated in the present or the near future. They quote another participant in their research who states that many young people suffer from a “planning delusion”. Howard & Davis comment on this: “We’ve witnessed this firsthand in our freshman reflection seminars at Harvard. Many students come to college with their lives all mapped out – a super-app.” They conclude: “Today’s youth approach their education as “practical credentialists” who complete the tasks necessary to get the diploma they need to secure a desirable job. They are far more focused on “daily life management” than on developing a long-term purpose. Consider that in 1967, 86 percent of college freshmen said that “developing a meaningful philosophy of life” is “very important” or “essential” to them, compared to just 46 percent in 2012.”

It seems not unreasonable to conclude that youngsters nowadays experience more trouble in storing information in their memory and in dreaming about their future life. Yet, as Anil Ananthaswamy (*The man who wasn’t there*, 2015) argues, these are the key components of our identity narratives. He defines identity narratives as follows: “the story or stories we tell others and indeed ourselves about who we are; these stories depend on remembering and imagining.”

The formation of our identity stories is not straightforward. According to the synthesis of Ananthaswamy based on interviews with many scientists and others – see below – the human brain has the capacity to turn episodic memories into semantic memories: “We have ... a special kind of semantic memory that has to do with knowledge about ourselves - a self-representation system. ... this self-representation system is essentially episodic memory that has somehow been turned into semantic memory about oneself.” If our self-representation system works well then episodic memories are continuously being converted to semantic memories, thus creating the gist of who we are.

According to Martin Conway, who is quoted in Ananthaswamy, we possess a conceptual self: “notions of who we are, based on our interactions with others, including family, friends, society, and the broader culture”. In addition, claims Conway, we have a working self: “the purpose of this working self is to reconcile a specific goal ... to the current state ... and ensure that the discrepancy between the two states is minimal ... In other words, the working self regulates behavior.” The working self filters our episodic memory. It “dictates what goes into long-term autobiographical memory and the easy with which it can be accessed. Stories influence who we are, what we do, what we can be ... stories can become our reality.” In this whole process “[t]he self’s need for coherence is paramount”.

If the premise by Ananthaswamy is accepted that remembering and imagining are the key aspects of our identity stories, and both aspects are hampered among many youngsters at this moment, then outcome 2 that coherent ready-made identity narratives are absent but are rather created on the spot becomes an explainable outcome. It means that Conway’s conceptual self is not coherent and thus the working self finds itself in the difficult position of forming an identity without a coherent point of reference. This would explain why youngsters feel that they do not play roles and do not learn – see outcome 4 – and only have an identity hunch of whom they are – see outcome 2.

Ananthaswamy takes a look at what happens when our identity narrations completely disappear. To this end he interviewed scientists, Alzheimer's disease patients and those close to Alzheimer patients. He does so because Alzheimer's disease "continues to hack away at the narrative until all one is left with is a set of disconnected episodes. Eventually, even those are gone." What remains is, according to Pia Kontos as quoted in Ananthaswamy: "a precognitive, prereflective selfhood that's embedded in the body."

In the early stages of the disease the structure of the identity narrative starts to disintegrate. What stays for a long time though is the so-called reminiscence bump. This is according to Robin Morris, also quoted in Ananthaswamy, a set of memories that we collect when we are "cementing our identities" between the age of 10 and 30. That phase in our lives is a "critical period ... where you are defining your self-beliefs and self-concepts ... We form the core of our narrative self during this time." Morris claims: "These basic building blocks – the essential concepts that define who you are – don't change over your lifetime, or they change more subtly."

A bleak picture now appears from the above. In the critical period when they should be defining themselves many youngsters do not seem to form a coherent identity core but rather a fragmented identity core that is to function as a point of reference to select additional episodic memories to be added to our semantic memory. In addition, less episodic memories are stored because of multitasking. Although this helps youngsters to survive the liquid times we live in without too much existential anxiety while preserving a feeling of authenticity, it is unsure what the effects of this situation will be in the long run.

Ananthaswamy provides a clue: "without a coherent story about oneself, one seems unable to act; it seems that we need our narrative to function". The narrative links episodic experiences into a greater whole. The part of the self that deals with the episodic experiences according to Antonio Damasio (quoted in Ananthaswamy) is the core self. The core self is the first intimation of subjectivity ... The core self is living in the moment ... If all we had was a core self, and many animals likely do, then all we'd be aware of are these moments of subjective experience."

Ananthaswamy continues: "It's when the brain evolved further and developed autobiographical memory that the next stage came about – the *autobiographical self*. Damasio hypothesizes that there is a brain circuitry that is capable of grouping together autobiographical memories into an object (one can think of this object as a story), letting that object interact with and modify the protoself, which then produces a moment of subjectivity. ... The autobiographical self would be/ a rapid sequence of such moments of subjectivity. This fully formed self would be the basis of one's personality."

Maybe, a less developed autobiographical self will lead back to a more episodic awareness, more disintegrated moments of subjective experience. If this were the case multitasking would be part of a self-reinforcing loop that would cause ever more fragmentation.[12]

[12] Online this fragmentation without a consistent point of reference runs the risk of landing one in an echo chamber – "an isolated space on the web, where the ideas being exchanged essentially just confirm one another. It can be a space of likeminded people sharing similar political views, or a page about a specific

conspiracy theory. Once inside one of these spaces, users are sharing information that is all very similar, basically "echoing" each other." (http://www.weforum.org/agenda/2016/01/q-a-walter-quattrociocchi-digital-wildfires) This seems to be happening when youngsters apply their "eight-second filters" as described by Finch, see footnote 7 in material outcome 4 above.

Material outcome 8 - Guidelines

Method used: analysis

The seven previous outcomes lead to a last outcome which is a set of guidelines that the instructors have set for themselves to use in future projects and in future contact with youngsters. This set is dynamic and will change over time.

In order for youngsters to be safer online and have better chances of becoming critical, reflective citizens, youngsters need wise adults who:

- Spend time with them online;
- Talk with them about their online experiences (see *EU Kids Online II*).

In order to be wise these adults need to:

- Create a situation of trust;
- Try to understand the interpretation frames of youngsters;
- Be able to present alternative interpretation frames that are acceptable for youngsters;
- Try to arrive with youngsters at a (if only partially) shared interpretation frame;
- Use this (partial) shared interpretation frame to reflect with youngsters on news, new technologies, online communication and visual information;
- Get youngsters to multitask a lot less or, ideally, not at all;
- Encourage passion in youngsters;
- Confront youngsters with their actions and responsibilities in order to provoke reflection.

As a result youngsters will be better able to:

- Practice and implement nonverbal communication;
- Critically and reflectively filter and understand more coherently news, new technologies, online communication and visual information;
- Create a more coherent identity narrative.

Adults need to fulfill a set of preconditions in order to achieve this. They need to:

- Be able to communicate asynchronously;
- Be able to conduct an inclusive dialogue;
- Be able to trust youngsters as they claim they already do and thus not check what youngsters do all the time or create saturated activity schedules for these youngsters but leave space for spontaneity and initiative;

- Not spy on youngsters but respect the privacy of youngsters; this does not preclude every form of checking on youngsters but this checking should be implemented in a transparent way: adults should disclose what and how they check – and why;
- Not use a fixed set of rules to guide their behaviour towards youngsters – because this does not work in liquid times – but rather try to be coherent when dealing with otherness;
- Be able to understand and reflect on news, new technologies, online communication and visual information;
- Have a relatively coherent identity narrative;
- Not multitask themselves.