

Observing the Alleged Internet Savvy:
Accounts of Exceptional Online Creativity by Dutch Youth.

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ABSTRACT

In new media and children research, the 'cyberkid' label is often used to describe the younger generation and creative online activities. Whilst this label rightfully underlines the increased access to more and new media by children, it does not adequately comprehend intense and skilled online activities. As such, youngsters become alleged to be internet savvy, whereas only a small part of this group really is. This research provides a better understanding of *what* internet savvy youngsters do online exactly, b) *how* they do it, c) *why* they do what they do when producing creative content and d) *how* they employ these activities in their everyday life. Building on robust data by the web-logging application Roxy and Constant Comparative Method results illustrate the complexity of exceptional online creativity. Producing activities are not self-contained and build on multiple structured, complementing activities. A two-fold typology becomes apparent; creativity wizzkids and exceptional creatives.

Keywords: children, new media, exceptional creativity, online activities

INTRODUCTION

Two fourteen year old boys from Washington DC administrated a YouTube account on which they post videos created by their own video-production company. Following the example of one of their favorite movie directors, the boys felt it was important to have their own production company as well. The videos posted on the YouTube channel were well received, resulting in thousands of likes and fan-comments. What it also triggered was the attention of media businesses, which saw greater potential in the videos for commercial purposes (Ito et al., 2010). What does such an incidence tell us? The internet offers youngsters new possibilities to receive feedback, not only from peers, but also from other professional spectators. Children can connect with large numbers of dispersed others and test wider reaction to their work. The ongoing development of digital media production tools combined with multiple outlets in which young people can post and discuss media works have led to a new 'ecology' that supports kids to get engaged in creative production (Ito et al., 2010). As youngsters grow up with the internet common to them, their capabilities with regards to this medium become well developed. Thus, labels provided by scholars such as *Generation M* (Roberts, Foehr & Rideout, 2005; 2010), *Generation C* (Bruns, 2008), *cybernauts* (De Almeida, De Almeida Alves, Delicado & Carvalho, 2011) *everyday creativity producers* (Jansz et al., 2015) or *digital natives* (Prensky, 2001) adequately emphasize the intensive use of digital technology by teenagers in the West.

The academic characterization of the younger generation as cyberkids¹ often implies intense engagement, advanced competence in production as online contribution as well as natural affinity with the internet (Holmes, 2011). However, the overall activity and competency of this generation as a whole is far from homogenous. The *producing* activity or *producer* type of user is found to be most contributing to the online environment. Yet the teens performing this activity or illustrating this persona encompass for the smallest share in the overall online youth (Van den Beemt, 2010; Holmes, 2011; Nielsen, 2006; Jansz et al., 2015). Considering the 90-9-1 rule postulated by Nielsen (2006), only one percent of online individuals accounts for heavy contribution to the online environment. This is reflected in the findings by Holmes (2011) whom emphasizes the minority of teenagers combining multiple online activities. Also, Litt (2013) identifies that growing up with technology access does not by definition lead to more skillfulness. It therefore becomes essential to add nuance in the characterization of our younger generation as a whole; there is a lack of acknowledgement of the fact that the cyberkid labels apply to a minority of the younger generation rather than illustrating the norm. Consequently, this leads to an omitted understanding of the cyberkids; the exceptionally creative teens whom are responsible for the heavy contribution to online production. Hence, in order to make a complete contribution to the gap in research on teenagers employing exceptionally creative online activities; this research analyzes a) *what* exceptionally creative teens do online exactly, b) *how* they do it, c) *why* they do what they do when producing creative content and d) *how* they employ these activities in their everyday life. The overall research question guiding this project is; “What do Dutch exceptionally creative teens (12-18) produce online, how do they do it, why do they do it and how does it fit their day to day life?”

Using a mixed method approach, this study is innovative and multi-dimensional in its design. In order to go in depth and give a thorough account of exceptionally creative teens, I have taken a case-studies approach. First, I have obtained quantitative data through a survey designed based on the results from a research project on online everyday creativity by youngsters in the Netherlands aged 12 to 18, in which I worked together with Jansz, Slot and Tol (2015). I have distributed the survey among students from the Stedelijk Dalton Lyceum (hereafter SDL) in Dordrecht, The Netherlands, which has been chosen for its teaching philosophy.

¹ I use this term to collectively refer to the before mentioned labels indicating the creative and intense use of media by teens in the West.

The Dalton education system asserts three pedagogic anchors; the freedom of activity, independence in responsibility and cooperation (Nederlandse Dalton Vereniging, 2015). This environment is enhancing of the type of creativity by children which is being explored in this research. Based on the survey results, 37 respondents were recruited for the research project of which 15 finally agreed on participation. Second, making use of Roxy web-proxy program (Menchen-Trevino & Karr, 2012), actual internet activity by the participants has been logged and reported with informed consent. The internet use log following from the Roxy program has been used to design the interview guide used in the final part of this research. This final part encompassed for in-depth interviews with the participants. Interviews were targeted at reviewing the Roxy logged activities, disentangling the motivations for the employed activities and evaluating these online activities as part of their everyday lives.

I will first briefly introduce the theoretical key concepts of the research. Next, the research design, the Roxy methodology and in-depth interviews are presented. The third part of the paper reports the results of the multi-method approach and describes the interrelation of methods. The analyses conducted in this section follow the Constant Comparative Method as it has been proposed by Boeije (2002). Finally, conclusions are drawn from what I have found and these will be translated into directions for future research.

THEORY & PREVIOUS RESEARCH

The first issue to address in order to answer the RQ is what is meant by exceptionally creative teens. In the introduction I have mentioned several labels scholars designated to describe the younger generation growing up in the West with regards to digital competence and online activity. I use the term ‘cyberkids’ to refer to the labels such as *Generation M* (Roberts et al., 2005; 2010), *Generation C* (Bruns, 2008), *cybernauts* (De Almeida et al., 2011) or *digital natives* (Prensky, 2001). In this section, I contest that the cyberkids label is adequately describing exceptionally creative teens and their online contribution we witness.

Cyberkids

Going in depth of the cyberkid labels, it is important to understand what actually has been measured before designating these labels. By referring to *Generation M*, Roberts and his colleagues (2005; 2010) describe the rapid overall increase in media use by US youngsters aged 11 to 18 in several ways: in 2010, media exposure increased by 2.25 hours on a daily basis and media ownership ‘exploded’ (p. 11), which is partly explained by the consumption of media moving into private, less controlled spaces such as the bedroom.

Along with the intensity of media usage, also the variety of using different types of media simultaneously has increased, of which the increase in online activities was the largest. The intense creative forms of online activity measured in this survey research encompassed ‘creating an online character’, ‘writing a blog’ and ‘posting a video’; all of which were employed by only 25 or less percent of the total sample. Also the *digital natives* in Prensky’s (2001) research are youngsters whom have grown up with digital media common to them. Intense exposure to media is underlined and emphasis is rightfully placed on changing thinking patterns due to online activities. Where this theoretical approach indeed explains the need for policies facilitating ‘non-natives’ of the digital environment to integrate into these new structures of thinking (p. 6), the approach does not differentiate levels of competence in the digitally advanced younger generation. Growing up with new media access is not a premise for advanced digital competence. This is reflected in the research by De Almeida et al. (2011) where *cybernauts* are defined as the self-reliant youngsters partaking in multiple online activities without the ‘nurturing’ guidance of their parents (p. 225). With that, this group of children is distinguishing themselves from the rest of their peers. Yet as De Almeida et al. defined the clusters according to the level of interactive media access and factors of parental background, their results put forward sociocultural differences and divides rather than an accurate indication of a child’s digital competence. Looking at the results more closely, the share of the *cybernauts*, nurtured by parents or self-reliant, is the largest. This is explained by the fact that De Almeida et al. designate the *cybernaut* label to children employing multiple activities online. Considering that multitasking between multiple media and activities has become the norm rather than the exception (Roberts et al., 2010), the *cybernauts* as termed by De Almeida et al. (2011) do not necessarily encompass the intense creating form of activity.

Taking this together, a lot of children fall into the cyberkid categories as these categories do not necessarily describe the type of activities that make up for the heavy online contribution. The question then becomes, who are exceptionally creative teens and what activities do they employ?

Online activities

It is important to gain an understanding of the overall range of activities in which can be engaged online and which of those activities are distinctive for exceptionally creative teens. Previous research on the online behavior of teenagers has attempted to design classifications.

Starting with a typology of users, Van der Beemt (2010), Holmes (2011) and Eisenbeiss et al. (2012) have defined rather similar groups. In the least active groups, individuals concern themselves with the mere consumption of online content. The second group entails the social aspect of online media and focuses itself on communication purposes. In the third group, users can be labeled ‘producers’ (Van den Beemt, 2010), ‘creational users’ (Holmes, 2011) or ‘creativity seekers’ (Eisenbeiss et al., 2012). It is in this group where activities actually result in creating and sharing online media content. Adding to that, Van den Beemt (2010) also distinguishes users as ‘gamers’, thereby typifying the group engaged in the online playing of games.

Apart from typologies of users, researchers have distinguished typologies of activities based on actual behavior. This is allowing for a more flexible approach towards the users and also underlines the difference in levels of intensity and passivity in online behavior by youngsters. *Consuming* or *Hanging out* is the lowest form of internet use and refers to a rather passive activity performed online. *Participating* or *Messing around* refers to social interaction and active engagement of the users online. *Producing* is the highest form of online activity, referring to users whom are creating and distributing content online (Shao, 2009; Ito et al. 2010). Levels of engagement are also underlined when taking activities as modes of participation. The most intense mode of participation is *Geeking out*, youngsters engage themselves with new media to set personal goals and produce their own content as contribution to the online space (Ito et al., 2010). Also, when looking at specific domains, a similar diversity of activities is found. In a virtual world case-study, the most intensive level is *Creating*, activity by users to design new content which did not in itself existed before (Slot, 2010). An online gaming case-study revealed a developmental pattern. When entering, users look for mere entertainment, yet develop skills and creativity over time by creating environmental features for their animals and deploy social relations with other users (Grimes & Shade, 2005).

Youngsters encompassing the creatively producing role online (Van den Beemt, 2010; Holmes, 2011; Eisenbeiss et al., 2012) are the type of user that is most likely to perform the highest level of online activity and thus is actively engaging and contributing online (Shao, 2009; Ito et al. 2010; Slot, 2010). These exceptionally creative children are keen for well-developed skills in their particular activities as well as their technical expertise. Most likely, they are intense in performing their activities, which leads to increased online skillfulness (Litt, 2013).

They also represent a minority; only one percent of the total of online users accounts for heavy contribution to the online environment (Nielsen, 2006) and it are few teenagers whom have the competence to employ multiple online activities on a high skill level (Holmes, 2011). It is this type of user whom is alluded to with the cyberkid label. This causes a paradox in understanding; exceptionally creative teens associated with the cyberkid label are a minority whereas the label is assumed to be applicable to the majority. Consequently this leads to a misassumption; the younger generation becomes alleged to be internet savvy, whereas only a small part of this group actually is.

Motivations and enhancers for online activities

Considering the second part of the research question, it is important to understand *why* online activities are undertaken. This research project embraces the theoretical explanatory frame of Uses and Gratification research. U&G argues that people use media in order to fulfill specific needs (Blumler, 1979; Rubin, 2002). In other words, the question of why people use media is answered from a perspective of needs. Children using online media are expected to be familiar with the platforms they engage themselves in; they participate and even create within online platforms in order to gratify a certain need (Rubin, 2002). The U&G approach is particularly applicable to users of online media because they by definition are active (Ruggiero, 2000), evidently shown by the aforementioned levels of performed online activities by youngsters.

A few motives were recurrent over a variety of researches on online activities of children. One motive is the need to ‘pass time’, a motivation often driven to dispel boredom or to pass free time without other responsibilities (Papacharissi & Rubin, 2000; Smock, Ellison, Lampe and Wohn, 2011; Quan-Haase & Young, 2010). A second motive can be found in ‘being relaxed/entertained’, referring to activities performed by users in order to gain a pleasant feeling and state of mind (Papacharissi & Rubin, 2000; Smock et al., 2011). Thirdly, the need for social interaction is gratified by ‘social relations’ (Papacharissi & Rubin, 2000; Smock et al., 2011; Dunne, Lawlor & Rowley, 2010). However, the research of Smock et al. (2011) underlines that the gratifications differ over types of social interaction. The motive to participate in group interaction might differ from the motive to engage in direct messaging, which subsequently is also gratifying in a different way. A fourth motive for online activity entails the need for ‘self-expression’. With activities accompanying this motive, users express something of themselves towards on online or offline audience.

This ‘something’ might be a literal creative outcome, but may also include an expression of personality (Shao, 2009; Beals & Bers, 2009). Another possible motive found by Jansz et al. (2015) is ‘information’. This motive includes the actively online seeking of information resources to gain knowledge about people, events or things.

Apart from motives for overall online activities, scholars have found motives for more creative online activities specifically. The fact that only a small group of users is active online in producing and publishing their own media content is reflected in the scarcity of academic results on the motives of this exceptionally creative group. Producing one’s own media content is motivated by self-expression and self-disclosure (Shao, 2009) – a motivation also found for youngster engaging with ‘game modding’; modifying the content of videogames (Ito et al. 2010). Social motives are also important: young players are modding in order to become part of an active community of modders. Also the entertainment motive played an important role; modders wanted to enjoy themselves and others (Jansz, 2009). Several researchers have pointed out that the creativity of online teens also arises from motives related to identity development. Based on interviews with creative teens it was found that online production is conceived as a way to present oneself. Some teens are focused on a strategic form of self-presentation, while others use the online environment to experiment with their identities (Stern, 2008). A similar kind of self-presentation was found in the motivations for creative engagement in the social networking site Facebook. Expressive information sharing in Facebook status updates, group contributions and content distributing contributed to the individual’s public self-expression (Smock et al., 2011).

In addition to personal motives for creative online activities, also enhancers within online spaces can be identified that increase the likelihood of creative engagement. Gaming elements in activities seem to trigger creative capabilities and creative outputs, regardless of ethnicity or gender (Jackson et al., 2012). Creativity is also found to be enhanced when children engage in thinking up as well as resolving strategies in digital games (Taylor, Ott & Pozzi, 2012). In this sense, I postulate that creativity as output in an online environment can be stimulated; when children are confronted with cognitive digital challenges they are more likely to develop themselves more in creative capabilities than children missing this type of challenge.

Online creativity

As this research strives to go in depth of activities of exceeding online creativity, it is key, then, to assert a definite term for online creativity.

In this research, the definition by Hennessey and Amabile (2010) is used when describing and reporting creativity, namely the concept of *everyday creativity*. This refers to ordinary personal skills being combined with other elements in order to create new products, without these elements necessary to be novel. Especially younger children are relatively often involved in artistic school activities such as drawing, theater and music – making creativity an activity (Van den Broek, De Haan & Huysmans, 2009). For the purpose of this exploratory research, ‘being creative’ is thus approached as an activity, thereby underling what creative activities children explore day by day. In order to distinguish every day creative activities from exceptionally creative ones, this research builds on the level of competence needed to perform the activity as intense creative activities require more digital skills and more knowledge of the user (Holmes, 2011).

The most recent research on creative activities among Dutch teenagers was conducted by the Netherlands Institute for Social Research (SCP) through a large-scale survey in 2005. Approximately one third of the teenagers were active by uploading and editing photos. Fewer teenagers had their own webpage (16 percent), or had a personal blog (8 percent) (Duimel & De Haan, 2007). In 2008, the SCP conducted a similar study. In three years, the available options for creating and sharing creative products online had increased, and that was reflected in the results. The group active in editing photos was still large (43 percent) and fewer teens were active in editing video (18 percent) and making music (17 percent). Having a personal webpage dropped in percentage and also only a small group (5 percent) reported to write a blog. The smaller percentages reflect activities concerning more user effort and thus are from a higher level; again the advanced, more competent user is representing the minority when taking the younger (in this case Dutch) generation as a whole.

Epistemology

Moving from theory to epistemology, we must ask ourselves the fundamental question of how to investigate online activities by youth adequately. There are many ways to get informed about these youngsters’ practices online – but what provides for the most accurate account? Considering the higher forms of creativity being the focus of this, I would like to return to the studies which identified these more intense activities. In their uses and gratification approach, Eisenbeiss et al. (2012) drew on survey questions and statistical analysis in order to better understand motivations and experiences in virtual worlds. Also De Almeida et al. (2011) based their research on a national representative survey followed by statistical procedures.

Van den Beemt (2010) used semi-structured interviews to investigate online activities and mood boards to provide the participants the opportunity to illustrate their creative activities in comparison to others. As many others, these researchers in particular have drawn on self-reported data. The disadvantage of self-reporting is the over-demand on the respondents' memory as they simply cannot remember and estimate their personal media use – in particular the internet as ubiquitous type of media. Also interviewing presents a challenge when it comes to self-reporting activities, respondents might adjust their media report with socially desired answers (Menchen-Trevino & Karr, 2012). A complementing tool to interviews and surveys is the media diary, as it provides researchers with a more tangible and accurate account of structure in media activities. However, media diaries may have the disadvantage of the respondent being aware of the need to report one owns activity which might alter normal behavior. All in all, it has proven to be difficult for researchers to combine behavioral analysis of respondents together with self-reported data.

The solution to overcoming the lack of robust data on online activities is found in logging internet behavior. Logging actual online behavior has long been out of reach; tools which were available to log online activity were either not available to academics or without informed consent on behalf of the respondent (Menchen-Trevino & Karr, 2012). Bridging this gap in multi-method research, Menchen-Trevino and Karr (2012) have created the Roxy web-log application. Roxy is a web-logging tool which works with informed consent, as the respondent is in charge of what is to be recorded as data and what is not. This history of activity can be reviewed and adjusted on a later moment in time by the respondent. Also, the researcher can narrow the logging of the web-proxy down to a typology of websites (e.g. information retrieval, gaming websites, etc.). As Menchen-Trevino and Karr indicated in their research reflection, having respondents willing to participate in a project that includes Roxy activity logging can best be understood as respondents giving a significant amount of trust to the researcher. Roxy enables the researcher to respect this trust by handing over a fair share of control to the respondents into what is, and, what is not to be used for analysis. This back and forth of giving and receiving trust significantly benefited the depth in the follow-up interviews after the use of the Roxy program. As such, by including Roxy in a multi-method approach, methods not only complement each other in order to increase validity and reliability, moreover, methods work in tandem to illuminate the structure of online activities and the motivations to employ them. The present research strives to add nuance in the academic discussion of the younger generation and their creative activities online.

The academic characterization of the younger generation as internet savvy is problematic as the *producing* activity or *producer* type of user which are the most contributing to the online environment are represented by a minority. Based upon literature review, I therefore postulate that youngsters have become alleged to be internet savvy, whereas only a few of them truly are. By introducing and combining the novel Roxy method with in-depth interviews I strive to present a more complete understanding of *true* cyberkids by providing an accurate log of their online behavior complemented with their motivations and explanations on their exceptionally creative activities at hand.

METHOD

In the present research project I've used a multi method approach. Through a recruitment survey, based on statistical analyses of the survey and dataset by Jansz et al. (2015), children indicative of exceptional creativity were invited to participate in the current research project. To collect robust data on the actual internet usage of exceptionally creative youngsters, the web logging tool Roxy by Menchen-Trevino and Karr (2012) has been used. After one week of web logging, the participants were interviewed in which the Roxy weblog report was part of the interview guide. The in-depth interviews took place at the respondents' homes in the room where they usually deployed their online activities. Interviews were analyzed using the Constant Comparative Method (CCM) by Boeije (2002) in order to identify patterns and similarities between exceptionally creative children.

RQ: "What do exceptionally creative Dutch teens (12-18) produce online, how do they do it, why do they do it and how does it fit their day to day life?"

SQ1: "What do these youngsters retrieve online [Roxy measure] and how does this information accommodate or complement their creating activity? [recruitment survey and in-depth interview]"

SQ2: "Why do these youngsters employ their online creative activities and how does it fit their day to day life? [in-depth interview]"

Respondents from the Stedelijk Dalton Lyceum (SDL), Dordrecht, NL

The research I conducted builds on the results from a research project on online everyday creativity by youngsters in the Netherlands aged 12 to 18, in which I worked together with Jansz, Slot and Tol (2015). In line with what other Dutch researchers found, the producing type of activity was the smallest (SCP, 2008; Van der Beemt, 2010).

Based on the outcomes of undertaken online activities, I have designed a survey which focused on creative online production by teens as this is the main characteristic of cyberkids. Additionally, one open question was added to provide for the opportunity to describe, if applicable, what the respondent created online. I have distributed the survey among students of the SDL in Dordrecht, the Netherlands.

The SDL is a Dutch high school with a specific teaching philosophy. Dalton education entails three pedagogic anchors; the freedom of activity, independence in responsibility and cooperation. These anchors are used to foster awareness in actions, learning responsibility and understanding how to work together with others (Nederlandse Dalton Vereniging, 2015). SDL does so by complementing the traditional school program with compulsory courses in arts, culture, ICT, society and sports activities – of which students are responsible for composing their own curriculum. Considering the approach of creativity being an online activity by teenagers in this research, the SDL provides for a unique environment to enhance and develop creativity. SDL agreed to collaboration and is the case-study high school of this project.

In total, 292 children participated in the survey. The scores and the answers to the open question indicated that 37 children could be considered as exceptionally creative and were identified as potential participants. Information brochures were given to the selected children in class to present to their parents. During the parental night² parents were given a presentation with further information on the procedure of further participation in this research. Participation agreements were signed by the parents as the children were underage. In total, 15 children participated in this project; 10 boys and 5 girls. At the start of each interview, respondents chose a pseudonym name for me to use when describing their answers.

Multi-method approach: Roxy web-log

The first part of the research project included the Roxy method and provided for robust data on the internet activities of the 15 participants. Before the Roxy web-proxy has been installed at the PC or laptop of the respondents at home, an informative appointment was made with the parents and the specific respondent, in order to address possible questions about Roxy or the research project in general. The Roxy web-proxy program has been designed to collect observational web data with informed consent, as the respondent is in charge of what is to be recorded as data and what is not. This history of activity can be reviewed and adjusted on a later moment in time by the respondent, however, all 15 respondents choose not to.

² Parental night is an evening where parents and high school teachers discuss the past semester and the performance of the child together.

When using the internet, the installed Roxy web-proxy asks the user to choose a session. The user can choose a user-session (with log-in by that user), a guest session (without log-in) or an unlogged session. After 10 minutes of inactivity, Roxy will again ask with which session the user wants to proceed. When installing Roxy, I explained Roxy thoroughly to the respondent and illustrated multiple functions of the web application. All 15 respondent signed the project agreement and participated in the full research.

The Roxy weblog allowed me to discuss not only the main theoretical themes of what, how, why and the everyday life perspective during the in-depth interviews but also to refer to activities the respondents undertook, but did not mention during the interview. Subsequently, I was able to then elaborate on the Roxy weblog results in terms of underlying motivations, competence and skills and finally, the relation and importance of these online activities to everyday life and offline activities.

Multi-method approach: In-depth interviews & Constant Comparative Method

The second part of this research consisted of the follow-up interviews, all interviews were conducted at home alongside the respondents' PC or laptop in the same room they would normally deploy their online activities – which was usually in their own bedroom or living room. This allowed for maintaining the respondents in their natural surroundings and also underlines the sense of trust which has been built throughout the research project; personal spaces were opened up and by the time the interviews took place, I had become acquainted with the respondents as well as their parents through several previous appointments.

The interviews were semi-structured through an interview guide that provided for a few common topics as reference points among the participants (Lofland, 1995). The interview guide has been based on the week report resulting from the data log provided by Roxy. The common topics used as reference points were based on the literature review and in line with the research question, going in depth of a) what they do, b) how they do it, c) why they do it and d) how it fits their daily life. On average, the interviews lasted approximately 1.5 hour per respondent. The interviews were marked by fluidity, as respondents were keen to illustrate their answers on screen, which also lead to a complete insight into how they employed their activities and how these activities were structured.

The interviews were analyzed by using the Constant Comparative Method (CCM) as described by Boeije (2002). CCM 'constitutes the core of qualitative analysis' building on the grounded theory approach developed by Glaser and Straus' (p. 391).

By constantly comparing codes and categories at different levels, the researcher is able to connect fragments and thereby roughly inductively develop theory. As this research strives to evaluate the novel group of exceptionally creative individuals, such an inductive approach is appropriate. CCM goes hand in hand with theoretical sampling, meaning that based on theoretically informed ideas the researcher decides what data to be gathered next and where to find them. Considering the research aims of finding out what, how, why and in what relation to daily life youngsters employ their creative activities, these theoretically sampled topics will also guide the analyses.

CCM in this research considered three levels. First, CCM₁ was performed through all 15 interviews per respondent on individual level. Second, CCM₂ was performed through all 15 interviews at total sample level, considering all interviewees as one set of exceptionally creative youngsters. Third, CCM₃ was performed through the two clusters of respondents which became apparent. This overall approach allowed me to discern conceptual similarities, to discriminate based on saturated categories and to discover patterns in a heterogeneous sample.

For coding, I have used the grounded theory approach of Strauss and Corbin (1998). In the first phase of open coding, I developed a coding scheme per respondent by analyzing the individual transcripts in CCM₁. In the second phase, I have compared the coding schemes of all respondents as part of CCM₂. Subsequently, the coding scheme was adapted based on *axial coding*, for example by adding sub-codes or combining codes which described. Categories are considered saturated when new fragments do not bring any new information to light throughout the different levels. Finally, I have conducted a procedure of *selective coding* by systematically comparing our codes with the theoretical concepts of what, how, why and everyday life. In the coding process, I was the only coder. By constantly comparing and making connections that are highly regarded through saturated categories, the internal validity of the findings is increased (Boeije, 2002). Constant comparison also adds to external validity when the sampling has been conducted well in a reasonably homogeneous population. Although generalization is not the aim of this study, careful interpretation of the results can add to explore to what extent these insights are also applicable to youngsters sharing background characteristics with our participants.

Qualitative research on rich data like interviews may result in issues regarding validity, especially when the material was interpreted by a single coder. In this case the validity of the analysis was meant to increase by the use of the quantitative Roxy method. Roxy contributes to more reliable results as the weblog is factual and robust.

The evaluation of the logged activities together with the respondent at hand added to a better overall understanding of online activities. As such, the reliability of this study is increased.

RESULTS

Roxy results

A few general Roxy results can be noted. In total, the 15 respondents accounted for 111.5 hours of online activities and 3021 searches during a one week time frame. Taking all of the respondents together, several online venues stood out due to a large amount of clicks. However, these peaks in activity could in all cases be described to one respondent. The platform visited significantly by all participants was YouTube with 880 searches. The searches within the YouTube platform varied over all of the respondents, thus indicating that YouTube was not used homogenously. The logged observation data obtained by Roxy did not indicate a pattern or routine for all respondents nor per respondent specifically. The data proved most valuable as a robust week-based online schedule, sketching a first impression of the scope and type of information retrieved online by the respondents.

Table 1: Roxy results

Top 3 searches by individuals	Website	Amount of searches
	1. nl.howrse.com	1086
	2. animefreak.tv	115
	3. mafiaway.nl	104
Top 3 searches by all respondents	Website	Amount of searches
	1. youtube.com	880
	2. google.nl	51
	3. dalton-dordrecht.nl	34

Constant Comparative Method (CCM) results

The analysis of the 15 accounts followed a three step procedure, in line with Boeije's (2002) CCM approach. The analysis is presented in tandem with Roxy results, as Roxy measures served as initiators for further topic discussion during the interviews. At each level, analysis follows the theoretically sampled topics what, how, why and daily life perspective. Level CCM₁ is not included in the results section as the purpose of this research is to illuminate group characteristics of exceptionally creative youngsters. CCM₂ is the collective sample level which has put forward two clusters of interviewees. Individual particularities and group similarities are part of CCM₃ and will be reflected upon at cluster level. Final results are translated and presented in two group profiles.

CCM₂ – Overall commonalities

Analyzing the 15 interviews at total sample level, the interviewees are considered as one set of exceptionally creative youngsters. CCM₂ revealed that even though the 15 children are not heterogeneous in terms of their undertaken activities, a pattern of activities affiliated with main activities could be distinguished. Pattern activities, in this sense, are activities which are employed in order to improve, accommodate or complement the main activity. Out of the 27 undertaken activities, 19 main activities included pattern activities.

Main activities and pattern activities are analyzed separately. The analyzed fragments in CCM₂ led to clusters of interviewees. These clusters are referred to as groups; C1, creative wizzkids and C2, exceptional creatives.

What: Main activities

In total, main activities could be distinguished which were undertaken by two or more respondents.

Table 2: Codes main activities

Main activity
Making music
Making videos
Gaming
Drawing
Watching anime
Editing images

The activity of making music is undertaken in different approaches. Felix (C1) downloads tracks online and makes re-mixes which he posts to his YouTube channel. Aideen (C2) also makes music by watching tutorials on YouTube and play along with her guitar or piano. Joey (C2) writes and records his own music digitally. The difference between Felix and Joey is marked by the understanding of the wider field in which the product, in this case music, is produced. Felix gives meaning to this process as he understand the differences between styles. He also expresses his urge to stand out; *“Well sometimes because I think it’s better to listen to, sometimes because I have played Skrillex way too much already, sometimes because it’s no longer original because everyone makes music with Skrillex.”*

In the activity of making videos the respondents undertake multiple approaches. Jacko (C1) has a professional YouTube channel on which he posts videos that provide tutorials on games and in particular Minecraft, episodes of the YouTube-show he has made up for his server in Minecraft and episodes of the radio show he hosts on Fridays. Mouny (C1) also makes videos to post to his channel on YouTube.

Mounty edits HD anime series in two languages of which he posts the full episodes to YouTube. Videos are also made together with family and friends by Aideen, Thomas (C2), Yolan (C2) and Mikey (C2). For them, making videos is a shared activity in the direct social network. Mounty expresses to be very concerned about quality and undertakes an intensive production process for the videos. Jacko likewise is concerned with the peers of his videos.

In gaming, Jacko, Yolan, and Joey play Minecraft. This is an example of an online, real-time game, meaning that the game continues constantly and that players need to log on and log off to the space in order to play. Another online, real-time game is played by Luna (C2), Howrse. In this game she owns several virtual horses and a stable and competes against other players. Other online games that are played are League of Legends by Nicolas (C1), Assassins Creed by Felix and Call of Duty by Kumar (C2). These online games however require teaming up by players in order to play a round together, which may take up to 45 minutes per round. Chase (C2) is the only one who prefers to play non-real-time games, for example Prince of Persia. In these type of games, players are able to play and save the game to continue at a later point in time without the game being lost. Jacko, Felix and Nicolas are very committed to their games:

Interviewer: "So when you leave this game, it doesn't matter?"

Nicolas: "No. My plane will explode."

Interviewer: "Don't you mind? Did I cost you points?"

Nicolas: "Nah, I have many points to fix them. It might cost me 1000 points or so. But ok this is game 1. Here I can play one round but in League of Legends (LoL) consequences are less fun.

Interviewer: "And who do you this with [LoL]?"

Nicolas: "Most of the time with Daniel."

Interviewer: "From school?"

Nicolas: "Yeah." [continues to play]

Nicolas: "A lot of click as you can hear." [still playing]

Interviewer: "Yes indeed?"

Nicolas: "This might take an hour, maybe an hour and a half. So when you start then.. Then you are busy. Yes, this takes eh, long."

Interviewer: "Can you stop it now?"

Nicolas: "Considering the interview.. haha."

Interviewer: "I'm surrounded by Assassins Creed [posters on the wall] – what can you tell me?"

Felix: "I'm quite a fan, of that series. It's a game, action-adventure game. At first I played it on the computer, but there I don't have a public NAT rating, so I couldn't find plays. Everything was a little slower on there is a little slower, it was kind of a waste of money. Luckily it was only 15 euros, at that time it was a year old or something. Now I play it on the Xbox and there I also just made some friends. I'm also on WhatsApp with them, that's how we stay in touch."

Interviewer: "Friends? People you got to know through the game?"

Felix: "Yes and then we became friends. And especially the Dutch off course, that's a bit more special. Because not that many people play that game – not the multiplayer mode and then on a competitive level."

Interviewer: "What does the competitive level mean?"

Felix: "In the summer break there is a competition I will definitely enter with my Dutch team."

Drawing is an activity undertaken by Felix, Aideen and Daisy (C2). Both Felix and Daisy use Photoshop and a drawing pad to digitally make drawings. Felix uploads his works to the online platform Deviant Art, but for the girls the drawings are kept to themselves or to share with friends.

Felix knows the Photoshop program well, he explains he uses the drawing pad and no longer needs to scan his original sketches into the computer. Daisy uses a CD with basic elements in order to be able to work with the program, as she explains: *"It's kind of like a stickman, so there are the basic shapes and lines. But they aren't developed well yet. Except for the hands. Hands are really hard, especially on this small drawing pad, just doesn't work."*

Watching anime online is an activity performed by a few respondents, Daisy, Kumar, Nicolas and Mouny mentioned anime during the interview and it was also present in their Roxy logs. Mouny re-produces series for others to enjoy all over the world. Nicolas switches between seriously watching anime series and teasing his online gaming friends with gay anime porn. Kumar on the other hand is more dependent on online recommendations or friends. Daisy is not capable of following these Japanese series, as she explains: *"No, they are very hard to find – or they are Japanese with English subtitles, but then they are of bad quality. Or you can't find the sequels. It's very complicated to find the right order."*

Mouny, Aideen and Luna edit existing images for new purposes, using an editing program. Mouny edits images with a purpose and a professional program which is more skill intensive. Luna and Aideen use basic website tools in order to make minor adjustments to images, such as rescaling or cropping the image. For Mouny, it's a meaningful action;

Interviewer: "Last time I was here, your father showed me a picture you had fixed for him. What can you tell me about that?"

Mouny: "It's a picture of my father of when he was little. He doesn't have a lot pictures. It's a picture of when he was still in Iraq. In those days, people had to wear a Saddam-thing, like Jews had to wear a Jew star. He asked me if I could change the picture and repair it. I worked on it for a few hours, I fixed the cracks and removed the Saddam-star from his school uniform. I re-touched it, so you couldn't see it was ever there."

What: Pattern activities

The pattern activities were prevalent throughout 19 out of the 25 activities, meaning that complementary to the undertaken activity 1 to 7 of these additional activities were recurring in a pattern.

Table 3: Recurrent codes of pattern activities

Pattern activity	Management
	Posts
	Writing stories
	Communication
	Community
	Meets
	Alteration
	Information
	YouTube
	Website
	Social media: Twitter, Facebook and Instagram

Management activities were undertaken with regards to several main activities. Jacko and Mouny manage a YouTube channel. Jacko is a professional YouTuber and gets paid for the views he generates with his videos. Isa (C2) has a personal blog and Aideen has a business for rodent hammocks. Aideen and Isa are excited to have peers, especially the idea of these people being overseas. Isa shows me her statistics: *“Ok so.. Here are my statistics, how many viewers I have but.. well I went to Barcelona so now there are a little less [she doesn’t seem to like it] hmm.. well I have about 500 viewers. And in these statistics you can tell where they are from, Russia, France, USA – that’s off course very nice to have them from the USA.”* Mouny and Jacko are mostly concerned with the amount of viewers they have. To make sure the videos are high in quality, Jacko interviews people who want to play in the server of Minecraft which is the stage for his videos:

Interviewer: “Do people follow your episodes?”

Jacko: “Yes they do. They spam in the comments that they want to enter the server. I don’t let a lot of people in, it will be too busy then.”

Interviewer: “Do you know the people in your server?”

Jacko: “Sometimes not personally. But when they ask it through YouTube I call them on skype, then I will say yes or no. That’s how I know them a little.”

Interviewer: “Kind of an interview for the server?”

Jacko: “Yes. Too see if the person is too young or too old, has a good microphone for the recordings, is enthusiastic, can act a little for the storyline. Those things I look for. I have a goal.”

As the respondents employ different types of main activities, the type of posts differ per platform. Jacko, Mouny, Mikey, Yolan, Thomas and Felix post videos to YouTube. Isa writes blogposts and Bella (C2) posts chapters of her fanfiction.

Isa and Bella explain how they post new items to their blog or fanfiction profile when they feel inspired. For Mouny this is however a more strategic and frequent process:

Mouny: "A lot of people who have watched my upload of cycle 1 ask if I can start uploading season two. But I don't want to, I want to finish uploading cycle 1 first. And then the opening of cycle 2 and then cycle 2."

"Why?"

"Well, that's the way I think it should be. That's what I want [grins]."

"This is the right order. So opening, cycle, opening, cycle. I just prefer it like that."

Another pattern activity is writing stories. The writing of stories is used for different purposes, complementing different main activities. Daisy and Aideen write stories to complement their drawings. Bella makes up storylines for her fanfiction. Jacko writes scripts for his YouTube show. For Bella, Aideen and Daisy, the stories are a personal outlet. For Jacko, the purpose of writing the storyline is not personal, but rather intertwined with management – the script of the videos is performed, recorded and published to the YouTube channel of which he makes sure that the storylines are outperformed by others in the way envisioned in the storyline.

Whilst performing the main activity, the respondents encounter several other actors online, some of which they know offline as well and some which they connect with exclusively online. Communication is a pattern activity that differs per main activity and per platform, but also per role of the respondent in the specific field. For most of the respondents, online communication is restricted to the topic of online activity. For Felix, Mouny and Nicolas, communication online is more meaningful and resembles friendship. Communication is also intertwined with management, Mouny monitors his viewers:

Mouny: "Luckily every day, if I check my Gmail or YouTube inbox, it's quite full. See when I check this video, 150.000 views."

Interviewer: "That's quite something."

Mouny: "I have 1300 comments so far. And here, I haven't checked my inbox this morning but I did last night and I had 14 new comments. I have about 40 new comments every day. And I always read them. You can get requests for uploads or questions. When I started I replied to every comment, then I answer questions."

Interviewer: "What kind of questions?"

Mouny: "Just about the series."

Interviewer: "How often do you upload new videos?"

Mouny: "Well the last one was 5 months ago. So I don't upload every day, but I'm active every day. It's a cycle. So it's not like you watch one video on my channel and you're finished. I can see it in my comments too, people comment on the first episode, then at 2, 3, 4, 5. And the next day or later in the week at 16, 17, 18."

Most of the main activities undertaken online are related to a community of online actors with shared interests. Chase, Kumar, Felix, Mouny, Nicolas and Jacko engage in game communities. Bella follows other Twilight admirers in fan communities.

Isa and Aideen find inspiration in fashion communities for their creations. Jacko, Nicolas and Mouny are also heavy contributors in the platforms of the communities. Mouny contributes to multiple communities, given his diverse online interests: *“Apart from anime communities I am an Android nerd as well. For instance here [opens community] I’m very active. I also have a high ranking here and I’m quite popular. I’m on this community every day.”*

As the main activities are online, the physical aspect of the activity is individual. However, some offline interaction is organized in meets which participation is a pattern activity. Meets can take form in conventions where individuals meet up with other actors from the specific field offline. Daisy attends conventions for manga and anime enthusiasts. She mainly follows American conventions online, especially the ones for My Little Pony fans as these are not organized in the Netherlands. For Jacko, YouTube conventions are an inspiration to professionally continue a career; *“Famous YouTubers have maybe 40000 subscribers. People with that many subscribers have to stop someday, I hope to do it too someday.”*

The main activities take place in predesigned online venues with basic elements and tools. In the pattern activity alteration, respondents undertake steps to alter the space, elements and tools they encounter while employing the main activity. Felix downloaded proxy scripts to alter the lay-out of the Pokémon game. Mouny uses scripts to alter the software of his Android smartphone. In gaming, Chase, Mikey and Felix search for scripts to use in the game Minecraft for alterations. Jacko write these scripts himself:

Jacko: “When I entered my kingdom, I did flight mode, I don’t know if you remember that? Well that’s an alteration. I make those things too. I just write them.”

Interviewer: “You just write them?”

Jacko: “Well, I have used some tutorials, but once I get the hang of it, I work it out myself, see what other options there are to explore. They explained the flight mode, but I have written the script to set someone on fire, also for how long.”

Interviewer: “So it’s a command?”

Jacko: “Yes, you say that just right, it’s a command. You can design it, write a plug-in or a mod. That’s a modification, you can enter it in your server. I make them myself, but you can also download some online. Like this one, this is what I’m working on. So that if someone dies from your team you will hear thunder.”

Searching for information is a pattern activity used to extend knowledge on the field or improve personal skill with regards to the main activity. For instance Daisy, Mouny and Thomas use online information to consider their offline purchases. Chase, Mouny, Felix, Joey and Mikey search for information about gaming elements. For Isa, Bella, Daisy and Aideen searching for information is also intertwined with admiration and inspiration.

Isa uses the favorite option in her web browser to folder fashion websites; *“Checkmyfashion and Fashiolista [communities] as you can see, but a lot of clothing websites too. A lot of American websites, of which there are no stores in the Netherlands. Like Forever 21, that’s also really American, you don’t have that in the Netherlands either. If I’m ever going to the US, I have to see the Forever 21 haha. This I can use for my blog, for inspiration.”*

YouTube is used to complement main activities for several purposes. YouTube can be used to add to personal development of skill, for entertainment or to semi-experience activities undertaken by others. Luna watches YouTube videos of people horseback riding outside and jumping obstacle, as this is something she does not do in her riding classes. Kumar, Chase, Yolán and Mikey enjoy to see others play the games they engage in. This is both to learn something and to watch games they don’t play themselves. Chase explains: *“I don’t have all of those games, because my computer can’t handle it. So if I find a game I like, I go on YouTube to watch other play the game because then I get to experience it too and see what it’s about. It is more fun to play the games yourself, but I know my computer can’t take all that so I accept my losses [grins].”*

Most of the main activities lead to online or offline production. Aideen searches for online venues to promote her handmade rodent hammocks whereas Jacko strives to promote his YouTube channel and Minecraft kingdom server. Both Jacko and Aideen pursue the pattern activity of making a website to complement the professional main activity. Aideen struggles with making a website and turned to an alternative instead; *“I’m working on a Marktplaats [online market place website] page. But there you can promote your personal website – so again, I talked to my mom and it would work better if I had my own website. I also think it looks more professional.”*

The final pattern activity concerns the use of social media. Jacko uses Facebook and Twitter to promote his professional YouTube channel. Thomas, Bella, Mikey, Joey, Aideen and Isa use social media for personal use, but do follow accounts that are affiliated with their online interests such as fashion or gaming. Isa and Bella also enter social media challenges to win items or interact with like-minded people online.

How

In employing their online activities the respondents have similarities in their approaches in terms of skill.

Table 4: Overview of coded skills and competence

How?	Strategy	Time-management
		Strategy
	Artistic skills	Crafting
	Online conscious	Online conscious
	Technological knowledge	Computer skills
		Advanced skills
		Average skills
	Competence	Ranking
		Reach
		Improving skills
	Intellectual knowledge	English language

One aspect of their approach is strategy. Strategy has multiple dimensions; how one strategically can manage their time or how one can strategically employ their activity for the best result in terms of reach or quality of their production. For instance, Isa uses browser options to make her blogging more efficient. Bella only reads the summaries in order to save time and effort in reading fan fiction. Thomas plans tasks in his game in the morning so he can continue playing when he comes home from school. Mouny on the other hand checks worldwide YouTube regulations in order to see what the possible reach of his anime series could possibly be before uploading:

Interviewer: “Do you also get requests for other series?”

Mouny: “Yes, I do. For instance here [points at comments], this was last week, if I could upload this one [points at title of anime series in a comment]. That’s when I download it and then I check if I can upload it and to what countries it’s limited. Because if it’s too much I don’t bother uploading it.”

Interviewer: “Too much?”

Mouny: “Well look, this one is not blocked in a lot of countries. Only Luxembourg, Switzerland, parts of France and Belgium but not in the US or Japan, or the rest of Africa or Asia or something. Then enough people are able to watch it.”

Crucial to how respondents employ their activities is their level of computer and device skills. Talking about skills, respondents mention different kinds of knowledge; knowledge in actual use and knowledge about specifications of devices. In online skills, all respondents are savvy in online tools and the platforms they employ. Nicholas, Mouny, Felix and Jacko use several devices in their online activities and are digitally skilled. Nicholas has tuned his computer in order to be able to play games intensively; *“Well, I’m off course quite a gamer and I game a lot. But something like Battlefield III or something like that is a lot computer-wise. And graphic-wise. It takes a lot from your computer. That’s what’s inside here. But I won’t name any components because it wouldn’t ring a bell for you.”*

Going about their activities, respondents build on advanced skills with regard to production. Advanced skills differ as the main activities are different for the respondents. All respondents are keen to get better at their activities. For Mouny, Felix, Nicolas and Jacko, advanced skills come more natural and they only look up selective instructions on parts of the production process. An indication of the complexity of the production can be taken by for instance Mouny, *“Good quality. It took me months to get the Japanese subtitles right for the opening of the episode. For instance this one [points at screen] took me 5 hours before I finished the episode. I tried everything, this is Kanji [Japanese writing] and if you want to hard burn it in the video you need the exact same font. But for some reason it didn’t work so I converted the subtitles and used several programs. I even turned my computer Japanese, to get the programming right.”* Chase, Thomas, Daisy, Yolán, Aideen, Mikey, Joey and Kumar look up full tutorials and rely on the information they obtain from others.

In some instances, average rather than advanced skills come to surface when talking to the respondents about how they employ their activities. Especially when comparing similar approaches to another, difference in skill is put forward. For instance, as mentioned earlier, Daisy uses a CD with basic elements for Photoshop whereas Felix shies away from basic elements as every drawing is new from canvas as he considers it unauthentic to use basic elements. Likewise Mikey has a hint of what mods are, or how to use them while Chase can explain the process of modding thoroughly and Jacko, Mouny and Nicolas design mods themselves. In making videos, Mouny undertakes a complex procedure whereas Thomas, Aideen, Yolán and Mikey use basic program tools to edit their videos.

The ranking within a specific field of interest is of influence as to how the respondents approach their activities. Ranking can be considered among direct, social network, on a national level and on an international level. Luna, Kumar, Thomas, Mikey, Yolán and Joey compete on a national level and are leaders in the direct social network. Chase, Nicolas, Mouny, Felix and Jacko compete on an international level, competing with the worldwide top ranked players or users.

How the respondents go about their activities is also reflected in the reach of their production. With regards to uploaded YouTube videos, Mikey is impressed with 40 views on one of his videos whereas Mouny is excited about having 1 million views on his video. Likewise, Jacko has received 3000 views on a post whereas Isa, Aideen and Bella are impressed with her views from the US – which are singular.

Motivations

Talking with the respondents about why they do what they do online, similarities in motivations were prevalent.

Table 5: Overview of coded motivations

Why?		
	Curiosity	Curiosity
	Free-time	Pass time
		Boredom
		Low threshold
	Meaningful	Appreciation
		Compassion
		Admiration
		Significant other
		Affiliation
		Experience
		Inspiration
	Personal meaning	Personal
		Outlet
		Stand out
		Personal growth
		Being good at it
	Competition	Competition
	Business	Business
	Social	Play together
		For others
	Challenge	Challenge
	Entertainment	For fun
		Wandering
	Alternation	Alternation
	Information	Information

One motivation is found in pass-time, this being a drive to do ‘something’ rather than actively thinking about the choice of activity. Pass time is mentioned often Nicolas, he uses this as an argument of engaging in a lot of activities thus spending a lot of time online. Pass time is also motivation driven, for Aideen, knowing that peers appreciate her creations makes doing something creative as pass time an appropriate decision; *“When I’m bored I look up fashion prints, but then I get inspired and then I can browse all night. Then I get new ideas, like hey, what could I do with this. And then I feel like creating something new and that gives me a feeling like – I do get compliments.”*

Another motivator to pursue the main activities is the urge to stand out. For Daisy in particular, the use of the platform is creative in itself as Prezi.com is intended to be a professional online presentation tool which she uses to make fanfiction episodes of My Little Pony. Experiencing to be one of few instead of being one of many is an impulse for the respondents to continue their creative activities and to improve their results.

Especially when receiving feedback by peers, described well by Aideen: *“That really gives me a boost, like what else can I do? I also did that [customize] on my phone.”*

The respondents understand their activity well and are keen on creative production. This position is a drive to pursue the activity, adding to their personal confidence. Being good at something is a large drive to continue an activity and pursue a higher level. For Mouny, Felix and Jacko is intrinsic and a motivation to help others get better at the activity too. For Chase, Kumar, Thomas, Mikey, Aideen, Joey, Yolán and Daisy, being good at the activity presents the opportunity to show off skill. Thomas describes this feeling: *“It is definitely true I’m more of an extremist compared to my friends. I don’t want other to catch up with me, or have a bigger city.”*

Another motivation to employ the online activities is the urge to explore and experience the main activity more in depth. For Nicolas and Jacko, the urge to know more is aimed at the wider field of production and staying up to date in many aspects of the field – even when not engaging in these directions. Chase and Kumar accept they don’t have the time or capacity to play everything there is to play. Nicolas however makes it a priority to be able to know something about everything new in the wider field of games. I asked him about games I found in the Roxy log which he does not mention himself; *“Actually I never played it and I’m not a fan. But this is the newest one, so yeah.”*

As the respondents engage in online production, their end products are in most cases automatically visible to others. These peers provide them with feedback and when positive, this appreciation is a motivation to continue the main activity:

Interviewer: “Why do you want to upload full series?”

Mouny: “It’s my hobby. And in one of my videos somebody commented, thanks for your – what’s that in Dutch? – I mean effort. Yes, effort. And then I reply it’s no effort to me, it’s what I do on the computer. I don’t see it as a lot of work but as something I enjoy doing. And then I contribute and I’m part of the series.”

Interviewer: “It [the YouTube videos] takes a lot of time, doesn’t it?”

Mouny: “Yes, but it’s like, if nobody does it, then I will. And then I feel like, it makes people happy. They are happy about me uploading it and it makes me happy to know people take the time to watch my videos. That’s why I keep on uploading.”

Interviewer: “What do positive comments mean to you?”

Felix: “It makes me really happy, then I feel like I should write a stereotypical thank you. You don’t really get angry comments, what the internet might be known for but which doesn’t happen here. It’s a community of artists, nice people.”

In most of the wider fields of the main activities there are some leading actors which can be identified. These leading actors stimulate the respondents in order to achieve similar goals, serving as a role model or inspiration. For example Felix admires a girl who's active on Deviant Art as well and can be considered a leading actor. As the conversation continues, it soon becomes clear that his reach is comparable to hers and they are equal with regards to Deviant Art status. For others, admiration is more distant, admiring other actors in the field of activity whom are not considered to be leaders in the domain. This feeling is expressed by Chase; *"Most people I know are older. 20 or so. And then I'm as good as they are and I think that's quite good."* Isa and Bella also express the feeling of being impressed; admiration does not invoke the pursuit of an equal status:

Isa told me she posted the Chanel bag to Instagram and Twitter. I asked her about the comments and reactions.

Isa: "My friends were like, oh my Chanel is so awesome. And I have fashion followers after I posted something from Chanel. That was really cool."

Interviewer: "What feeling do you get when such an account starts following you and how is it different?"

Isa: "Well if someone follows me whom has like 5000 followers, that's off course really cool."

Another meaningful motivation is that of compassion. Bella is a fan of the Twilight saga and her fandom extends itself from the books to the actors from the movies. She expresses her compassion with the actors, who don't have a lot of privacy. She also empathizes with the author of the books as she explains how the author was hacked and that chapters leaked online; *"And now she does not have ideas anymore and she is a little upset. And I understand that. I discovered this unfinished book later on."*

Especially in the main activity of gaming, competition is a stimulant to continue engagement in the online activity. Competition can be approached as a shared commitment or as personal drive. Felix for example organizes online training sessions for other Dutch players, a specific choice as he explains: *"English wouldn't be a problem either. I'm bilingual. But there are other people for that."* He continues: *"I actually established a team to help Dutch players understand the game better. So there also a few players in our team who don't know that much about it. But you see them get better and get really good. Because of you that is."*

Another motivation for the respondents to undertake certain activities is the enjoyment of their production by others. Mouny and Jacko are keen to monitor the experiences by peers to improve the quality of their work to attract more peers. Jacko expresses this when I ask him what he likes most about managing a server: *"What people like and how they use it. Like the kingdom server, what they build, I'm really curios about that."*

And in my other server, which mini-games they play most often.” Luna, Bella and Isa are more concerned with the experiences of peers whom are already following their work:

Interviewer: “Is it in your pursuit to get more likes or followers, or the awards you were talking about? [on Wattpad]”

Bella: “Yes, that’s always nice but it’s not like.. I do it more for the readers following me now.”

Interviewer: “Do you want there to be more?”

Bella: “Yes, but on the other hand, I do it because it’s fun for me. And eventually more people will get to read it, so.”

The factor of challenge in the online activities of the respondents is also an important motivator. Challenge is about crossing personal boundaries but also about verifying knowledge or skill. In describing the need for challenge, Mouny explains the need of knowing how things work technically; *“When I find things in the computer, I just want to know how it works. And if I can’t figure it out myself, I look it up. I don’t know, I want to see how it works and I want to see if I can do it myself.”* Aideen describes this as a personal process:

Interviewer: “How much time do you spend on looking up information online?”

Aideen: “It really depends. Sometimes I do something for weeks and then it stops. Then I might pick it up a month later again. It’s not like I do one thing all the time. I choose things or new things if I feel like it. That might be something I was into a while ago.”

Interviewer: “Is it important to you?”

Aideen: “For me it’s important to know if I can do it. Can I customize my clothes? Can I make remixes? Am I good at making videos? That’s what I’m capable of.”

Interviewer: “Is it a challenge?”

Aideen: “Yes, to achieve it. I don’t do a lot of difficult things, like I give easily too sometimes and I don’t like that. But sometimes I have something which does feel like an achievement. I like those activities.”

Interviewer: “What do you mean?”

Aideen: “For instance the hammocks. At first it didn’t work out so well. But then I got better and better. And I learn new things, new details and prettier finishing.”

Interviewer: “What motivates you?”

Aideen: “That motivates me. At first I only made the simple ones. Now I make hammocks with different features, the rodents can get inside a satchel now. Improving my knowledge about making these hammocks, I like that.”

As the respondents employ many different online activities they can argue why they choose to employ what activity at what time and indicate if this is routine related or if it comes about naturally. As the respondents engage in many online activities and different types of producing activities, they express the urge to alternate between activities. Chase explains this when I ask him about a YouTube account, Banjomovies, I retrieved from his Roxy log: *“It’s about the news, this guy makes vlogs. He talks about the things that happen in the news, I have 3 or 4 of these accounts. I also like these when I get tired of all the gaming. But most of them are gaming affiliated.”*

Everyday life perspective

The activities undertaken by the respondents account for a substantial investment amount of time and effort. In doing so, the respondents give meaning to the activities when discussed within a daily life perspective.

Table 6: Overview of coded everyday life perspectives

Daily life?	Social aspect	Online relations
		Offline relation
Day routine		Person for the job
		Activity amount
		Routine
Self-reflection		When inspired
		Personal skills
		Self-knowledge
		Over estimation
Role in life		Future
		Role in life
		Part of me

During the activities the respondents encounter other actors and peers online, some of which they develop an online relation with. These relations can resemble acquaintance but also friendship. Felix, Mouny and Nicolas use the term ‘friends’ to describe online and offline relations interchangeably. For example when I asked Nicolas about an anime website taken from his Roxy log, he told me: “*A friend of mine. Let me check if he’s online.*” I asked him if he knew him personally, Nicolas: “*No he’s a Norwegian. A Norwegian. So I wouldn’t eh. I have never met him.*” Online relations can also transform into offline relations, for instance Felix plans to meet up with his Assassins Creed crew over summer.

Opposite of online relations are offline relations, the direct social network of the respondents. Considering offline relations, respondents are eager to help their close friends in their online activities. However, the shared production is re-used further in the main activities by Felix, Jacko, Nicolas and Mouny. For instance Mouny, uploaded an anime series for a girl from his class. He explains: “*If I upload it for her I upload it to my channel simultaneously.*” For the other respondents, offline relations are more personal:

Interviewer: “But is it something you do together?”

Daisy: “Yes, especially with my two best friends. One of them had a book about it. Then she started drawing it and that day I started myself too. After school I showed it to her, she said it was pretty good, gave me a few tips. That’s how we became even better friends.”

In the direct social network the respondents often take the role of being the person to turn to if help with regards to an online activity is needed. These favors consider technical support or sharing of more extensive knowledge.

Felix for instance helps out with full software programs or provide extensive explanations or work-shops for school projects in Arts class.

The activity amount varies over the respondents as the main and pattern activities differ. The activity amount is dependent on the further daily life schedule as well as the priority given to the online activities. Felix, Mouny and Jacko are more focused on the end results and is willing to offer much more time and effort to achieve the set personal goals. Mouny describes the investment of time: *“It’s about two to three and half hours per episode to upload, nothing changes about the quality. Which is also quite long, but in the weekends I can do three. And if I go to school, I just keep it on while I’m away.”* However, they have a less accurate conscious of time. Other respondents understand that their skill and activity is limited to time and other scheduled daily life activities.

The respondents employ multiple main and pattern activities, some of which are intertwined with one another. This intertwinement lead to the discussion of daily routines during the interviews. All respondents mention doing schoolwork before turning to the online activities. Most of the respondents were keen on mentioning other day to day activities or daily obligations, thereby taking into account accurate estimations of time. They also are keen on planning, which Chase does daily to keep up with his communities. I ask him when he checks his notifications, Chase: *“When I wake up in the morning. I set my alarm clock 15 minutes early on purpose and then I use my phone to watch a video or check the community to see what’s new.”* However, Mouny, Felix, Jacko and Nicolas spend a lot more time on the online activities when also taking into account their explanations of time spent on activities. For instance Nicolas makes it come across as though he has much time left to spend on gaming and has ‘nothing else to do’. Knowing that he plays multiple games with rounds going up to one hour, 5 plays make a large chunk of day activity. Also Mouny is contradictory, whereas he explains his time off as going outside as a routine, he also admitted to devote his summer holidays to finishing a new series to be ready for uploading to YouTube – which would require a yearlong of work during the weekends.

Addressing the importance of the activities in relation to daily life, respondents reflected upon their personal undertakings and competence. Some respondents are more skilled and compete on a higher level in the specific domains compared to others. As Mouny, Nicolas, Felix and Jacko are more focused on the wider, international or total field, the comparison is made to significant leading actors in the field. Setting this as the bar to which they measure themselves, their self-reflection is humble. The other respondents take upon a role of leader in the direct social network.

This position tends their self-reflection to be higher as the comparison is made to direct peers as opposed to significant leading other actors in the specific field.

The main activity takes a fair share of the daily lives of the respondents. As such, the commitment and the role of the activities in daily life are discussed. The role of the specific activities is described differently in terms of the level of necessity. Most respondents are conscious of other things being more important in life, as Luna describes: *“Important are stuff you need to do for school. This is a hobby and that’s how you should look at it. If I don’t find the time, I really won’t.”* However, for Felix, Jacko, Mouny and Nicolas, it is only natural to give priority to the undertaken online activities. The value of the activities as a personal outlet and extension of daily life is much more intense for them. Interestingly, they not experience the main activity as relaxing; the intense level in skill is experienced as hard work rather than entertainment. Felix expresses this feeling: *“Music only takes an hour to play a few tracks after another, I really enjoy that. And drawing starts out ‘ok’, but becomes more fun, but it takes more time. I don’t like the initial stage of drawing that much, you need to sketch and you need to get all the lines right. And I’m very perfectionistic about that, because I want every line to be beautiful and fluent. That can be stressful at times.”*

The respondents described the role and commitment to the main activities as part of their daily lives. However, in doing so, it became evident that the activities also served a higher purpose – being part of oneself. In relation to fandom, Bella described herself as a Twiheart, fan of the Twilight saga. Mouny describes himself as an Otaku, a fan of specific type of anime. Furthermore, in describing the activity as part of oneself, Isa, Aideen, Bella and Daisy underline the personal achievements of being able to perform the activities. Isa expresses this feeling: *“I do think, well it’s not, it’s not like, oh my blog, haha. It’s just fun. I do think.. it’s a part of me. It’s not something important to do, but I do enjoy it a lot.”* For others, performing the activities is an extension of the self, describing the activities to be what defines oneself:

“What role does YouTube have in your daily life?”

Jacko: “Yes it is very important in my life to do this. It is something I like doing and what I’m known for. It’s what people like about me, that I do this. That’s why I like doing this, I had a week in which I thought, maybe I should quit. This was before my kingdom server, but after I started my kingdom server, I quickly went to 100 subscribers. That’s when I thought, I won’t get this opportunity again to get this many subscribers, I have to go through with this.”

Discussing their dedication to the creative activities the respondents envision their future efforts.

For Jacko, Felix, Nicolas and Mouny, future speculation entail concrete steps of their professional online endeavors to increase the quality of their production and extent of their reach even more. Jacko discusses his own YouTube channel in comparison with the channel by David, a famous Dutch YouTuber. He explains what he would do if he would have as many views; *“If I would become that famous too, but then I would want a lot in terms of money and I would buy better equipment.”* For the others, future envisioning is close to wishful thinking and does not entail concrete steps:

“Do you want to pursue making videos?”

Mikey: “Yes I’d like to, might be fun to do as a job.”

“What do you mean?”

“You can become a professional YouTuber, you can make many if you have a lot of hits.”

... “Do you have a plan to achieve this”

“No, it’s just a dream.”

CCM₂ – Clusters

The respondents have been approached as one group of exceptionally creative teens. Yet analyzing the individual fragments (CCM₁) on total sample level (CCM₂), respondents grouped together naturally in two clusters. This presents an overarching finding; exceptionally creative teens can be understood in two levels of intensity. Cluster criteria³ were based upon amount of main and pattern activities, level of advanced skill and knowledge as well as the reach in terms of production in terms of national or international participation in the wider field of the activities. This consequently led to the following divide of respondents:

Table 7: Divide of respondents

C1 – Creativity wizzkids	C2 – Exceptional creatives	
Nicolas	Daisy	Joey
Jacko	Yolan	Bella
Mouny	Chase	Aideen
Felix	Thomas	Kumar
	Isa	Mikey
	Luna	

Exceptional creativity in this research is approached as an activity. However, the two clusters contain indications of personality traits, intrinsic motivation and broader life perspectives, making group profile characterizations a more appropriate choice.

³ Criteria table available upon request.

CCM₃ – Group profiles

In this level of CCM, the clusters were analyzed as groups, identifying commonalities and particularities. The commonalities have been outlined in the group profile to summarize and differentiate between the two levels of exceptional creativity. The first group is C1 – creativity wizzkids. The second group is C2 – exceptionally creatives.

C1 – Creativity wizzkids

Commonalities

1. **Intense management.** Posts are strategic and not recorded at random and scheduled for publication according to a pre-defined order. Management exists of many supplementing activities which all add to a higher quality of the production. The commonality in this activity is the standards creative wizzkids set for themselves and the amount activity they undertake in order to achieve their personally set goals.
2. **Intense engagement** is marked with a deep knowledge of the field and arguments which come from an informed, personal perspective.
3. **Intimate online communication and relations.** When communicating during the activities or about the production the communication is experienced and described as personal. For creative wizzkids, online and offline friendships are equal.
4. **Monitoring reach of production.** In employing their main activities, strategy with regards to the reach of their production is of high importance to creative wizzkids. In managing their pages, creative wizzkids monitor the activity of peers with regards to their production.
5. **Advanced competence and knowledge.** Skills on computers and devices are extensive and also technological competence is advanced.
6. **Encouraging of effort by others.** Creative wizzkids are eager to help others get better at the main activity
7. **Curiosity.** Creative wizzkids are curious about latest developments in the field, also about segments they do not engage in actively.
8. **International competition.** Creative wizzkids are thankful of the large amount of appreciation they receive from the field. They are familiar with the most significant others in the field, some of which they can live up to in terms of equal skill and potential.
9. **Indifferent towards online and offline relations.** Online and offline relations are described equally, making online relations equal to friendships as described in offline relations.
10. **Responsibility.** For creative wizzkids online production is a significant part of life. The role of these activities are prominent and serious. As such, the activities itself are not relaxing or entertaining but experienced as a responsibility.
11. **Priority and part of self.** Creative wizzkids give priority to the production process and work towards personal set goals. The prominence of the activities is also underlined as the online production is considered to be an extension or part of oneself.
12. **Structure.** Creative wizzkids might not have firm routines in which they employ their activities, however, they do apply structure to parts of the production process.

C1 group profile – Creativity wizzkids

What

Creativity wizzkids are keen on increasing their knowledge in depth of the field. They invest time and effort to be up to date with latest developments. Furthermore they strive to stand out and improve the quality of their online production.

In employing their activities, creativity wizzkids argument their actions by describing the purpose of the activities.

Creativity wizzkids employ multiple complementing activities with regards to the main activity. These complementing activities are employed for multiple purposes – either to increase the quality of the end product, to increase the reach of the end product or to increase the enjoyment of the end product for others. Also, the complementing activities are often more affiliated with professional use rather than being a personal outlet.

Creativity wizzkids supersede the producer label as their main activities are self-contained and intertwine with multiple pattern activities at different production levels. Holmes' (2011) postulation on how the producing type of internet user is able to perform multiple activities on a high level is reflected in the activities undertaken by creativity wizzkids as this group performs multiple main activities. Adding to that, pattern activities considering these multiple main activities are also employed, marking an intense, varied contribution to multiple fields. This also corresponds with Nielson's (2006) notion on the minority accounting for the heaviest online contribution. Indeed, compared to the other clusters of creative youngsters, creative wizzkids evidently take part in the wider main activity field as international leaders.

How

Looking at how creativity wizzkids employ their activities it is evident they are strategic in their actions in order to achieve professional goals, thereby competing with international significant others in the field. This professional level makes management an important aspect of how creative wizzkids employ their activities. Due to their high level of skill they are able to focus on perfecting and promoting their online production. Other than that, creativity wizzkids do not let technological limitations restrict their actions.

Litt (2013) described how the intensity in the activity can lead to more skillfulness. As this group is keen on employing as many pattern activities adding to the quality and reach of their production they undertake a respectively higher amount of activities which is reflected in their general knowledge as well as their position in the field.

Motivations

The reach of their online production has a deep personal value to creative wizzkids. They feel responsible for their peers and take leadership in guiding others through online activities, thereby sharing knowledge. In doing so, creative wizzkids are strategic and analytical, e.g. training others or providing them with strict guide lines.

Having a leading, higher status in the field has and still does require seriousness investment in terms of time and effort. Being on top of the game is a position creative want to keep, therefore, they are motivated to stay up to date with the latest developments of the entire field – whether these developments are of direct importance or not.

Motivations for creativity wizzkids connect to a higher purpose of the activities they undertake. In the personal sense this means that motivations surpass self-representation (Beals & Bers, 2009) or self-expression (Shao, 2009) and describe the activities as ‘part of oneself’, (see next section). This relates to motivations describing meaningfulness in terms of gratification in helping others, appreciation of personal production by peers and significant others and the urge to stand out. In order to gratify these motivations, respondents in this group are willing to make intense personal investments with regards to time. Moreover, the main activities employed by creativity wizzkids are not experienced as entertainment or relaxation (Papacharissi & Rubin, 2000; Smock et al., 2011). This also underlines the meaningfulness and professionalism in their undertakings.

Everyday life perspective

For creativity wizzkids the online production and accompanying activities are a meaningful part of life, at time representing a part of oneself. This significant role of the activities is visible throughout their motivation to employ the activities and in the amount of time and effort invested in the activities in order to achieve and maintain the level of skill. As they are professionally successful at a relatively young age, they do not wish to exclude their online creative activities from their future life perspectives. They are modest in describing their abilities as they set the bar high due to in-depth knowledge of the field, and thus, other significant world actors.

C2 – Exceptionally creatives

Commonalities

1. **Use of tools at direct disposal.** Exceptionally creatives know how to build on the standard functions and options they have at their disposal. They invest time and effort to maximize the use what the tools they have available to produce novel things.
2. **Importance of direct social network.** Exceptionally creatives are accepting of information provided by peers or the direct social network. Gaining feedback from personally related others is more important than equally skilled participants online. Being the person for the job is also a leading role experience, a motivation to continue the activities and undertake pattern activities. Being good at it is a motivation to continue the main activity. More concrete, being better than close friends is experienced as leadership. Competition is focused on the direct social network and mostly covers showing off skills.

3. **Person for the job.** In the direct social network exceptionally creatives are leaders in terms of skill and competence when compared to the direct social contacts. Able to perform more advanced alterations to e.g. games.
4. **Activity related online communication.** Keeping contact about the game topic or non-intimate topics. Communication is restricted to the topic of the specific activity online or non-intimate topics between likeminded online participants. There is a clear difference between online and offline relations. Rational perspective on the importance of the creative activities.
5. **Informative latent action.** Using basic elements, C2 creates new products. Whilst C2 is actively looking for more information, new found knowledge is not practiced directly.
6. Keeping it to admiration of future possibilities rather than actual steps to progress and achieve envisioned goals. Not undertaking the concrete steps needed in order to achieve future perspectives.
7. **Social media.** C2's overall use of social media for personal and social engagement or self-expression.
8. **Experience and substitutes.** Replacing personal participation in gaming (Kumar, Chase) or horseback riding (Luna) with online substituting activities such as YouTube videos of the activity by others.
9. **Self-education.** Improving personal skill by building on tutorials found online for main, pattern and additional activities. Exceptional creatives use existing tools or examples to perform the activities independently. Searching for available information in order to increase knowledge and advance personal skill.
10. **Strategy** overall implies tricks to save time or effort in employing activities online.
11. **Online consciousness.** Being conscious online in terms of the space they employ activities in (online risks) as well as the time they spent on these sites with regards to other activities in daily life.
12. **Advanced skills** are basic but employed independently after watching significant others. C2 is interested in more advanced abilities online and watch other actors from field perform activities they consider as advanced. The advanced skills are the first steps to advance personal competence.
13. **Impressed by unknown peers,** especially when originating from a different country or the USA.
14. **Free of structure.** Lack of structure and need for organization makes the main activity also a drive to pass time, stumbling upon incidental moments of inspiration. As the main activity and the complementing activities are less professional and less structures, there is more room to enjoy the activities. For exceptionally creatives the activities are not structure and quality driven, making them more relaxing.

C2 group profile – Exceptionally creatives

What

Exceptionally creative youngsters invest time and effort in order to be capable of online production. To create something novel, these kids combine existing information available or tools for help in production with personal elements. For them, being able to produce online is more important than the quality of the end product. Exceptionally creative strive to improve their skills and employ activities in order to get forward.

Exceptionally creative children employ one or two complementing activities with regards to the main activity. These activities are mostly employed in order to increase personal skill or more knowledge, leading to more skill. Also, the complementing pattern activities are often more affiliated with a purpose of personal outlet rather than professional use.

With regards to the before mentioned typologies of users and activities, exceptionally creatives surpass this category as their main activities are not self-contained and they employ multiple other pattern activities at different production activity levels. Exceptionally creatives employ multiple activities which usually revolve around one main activity, yet these are undertaken at a slightly lower level when compared to creativity wizzkids. They also add to the heavy production found online (Nielson, 2006), the extent of their reach is however limited to the national level and the direct social network when compared to the other group.

How

Exceptionally creative children are eager to improve their competence with regards to their online production. They invest time and effort in order to employ more and more difficult aspects of their online production by building on instructions and knowledge they look for online. In doing so, they are able to distinguish valuable peers (significant other actors) from followers (peers that value their production). As they are not competing in the top segment of the field, their focus also includes examples of significant actors from the specific field, providing room for admiration.

As the exceptionally creatives are also intense in their engagement, they are more skilled and leaders in their direct social network and on a national production level – supporting Litt’s (2006) notion on this interrelation. Exceptionally creatives also invest in gaining skills, in doing so they rely on information and practice examples by significant others in the field. This marks a strategic and active attitude towards self-development.

Motivations

Exceptionally creative teens are personally attached to their online production and the direct peers. Having peers – at all – is an accomplishment in itself. For others, they feel urged to continue their production and exploration of the specific field. Having knowledge which makes them stand out, however, is something they want to keep to themselves rather than share with less skilled direct peers.

What marks exceptionally creative kids is the prominence of challenge for their activity. Exceptionally creative teens are eager to master new competences and for that reason motivated to employ activities for information purposes (Jansz et al., 2015). The main activity is experienced as relaxing and entertaining (Jansz, 2009; Papacharissi & Rubin, 2000; Smock et al., 2011) yet is undertaken seriously. Exceptionally creatives are leading actors with regards to the direct social network and on a national level, this position motivated them to invest in the main activity as they feel they can express and represent themselves (Shao, 2009; Beals & Bers, 2009) but most importantly, stand out with regards to direct peers.

Everyday life perspective

Exceptionally creative teens are keen on continuing the online production and activities, striving for and making investments in the improvement of personal skill. In daily life, these activities are prominent, yet aligned with other day to day activities. Even though they are eager to work for better results and admire future perspectives of a large reach of their production, they are realistic in knowing that the creative online endeavors might not lead to a stable future.

CONCLUSION

My research about online activities by Dutch exceptionally creative teens (12-18) aimed to provide a robust illustration of this minority of the younger generation to oppose the generalizing cyberkid label assuming teens in modern society to be internet savvy. Going in depth of the activities undertaken by my respondents I soon discovered a twofold cluster level among the respondents which resulted in a two groups of exceptionally creative children; creativity wizzkids (C1) and exceptionally creatives (C2).

The first research question was targeted at the kind of activities employed by exceptionally creative youngsters. Whilst the respondents were not heterogeneous in their activities, a homogeneous pattern arose from the second level of CCM. Undertaken activities included; blogging, writing fan-fiction, making music, making videos, managing personal YouTube channels, gaming, drawing, making rodent accessories and interests in sailing, fashion, TV series and collector items. Main creative activities were supported and complemented with a set of pattern activities; management, posts, writing stories, communication, community, meets, alteration, information, YouTube, website and social media. Creativity wizzkids in all cases undertook almost all of the pattern activities with regards to their main activities, indicating the level of structure and strategy in the activity as a profession. Exceptionally creative children undertook three to seven of the pattern activities with regards to the main activity, indicating the seriousness of the main activity as part of daily life. Overall, results have shown how much more complex the production process than *producing activity* classifications and *producer* typologies have outlined so far.

The second part of the research was focused on how exceptionally creative youngsters employ their activities. Overall the undertaken activities by the respondents were marked by a high level of skill and competence with regards to the main activity.

For creativity wizzkids activities were undertaken in high regard of quality, demanding a more advanced level of skill. As they are competing on an international level in the specific fields, ranking and reach of production were higher when compared to the second group. Exceptionally creatives were marked by a leading role in regard of the direct social network and were top-ranked at national level. Their activities were marked by eagerness to improve skill and competence in regard of their main activity, thereby taking an example of leading actors and wandering online for information and tutorials to self-educate. Both groups were indicative of strategy; creativity wizzkids being strategic in management and profession, exceptionally creatives being strategic in time and management of effort.

The third part of the research question is focused on the motivations for the creative activities by the respondents. Overall, the motivations by the respondents have proven to be layered and varied over activities specifically. Also, motivations have illustrated to be more intrinsic and meaningful than described in literature up until now. A few motives stood out; curiosity interrelated with retrieving information for knowledge, creativity wizzkids were curious of development in the overall field of the main activity and exceptionally creatives were curious of personal boundaries. Also social interaction as motive proves to be multi-dimensional; it can mean to be engaged with others and play together but also to help others get better at the same activity. Another distinctive motive was the appreciation of production by peers and significant others. Creativity wizzkids were most keen on helping others and appreciation of their work by leading international actors from the field. Exceptionally creatives were impressed by any appreciation of their work and feel committed to their peers. Lastly, personal meaning was distinctive in motivations. The main activity is considered to be a personal expression and outlet, stands for personal growth and as a mean to stand out. All in all, in describing their undertakings respondents are keen on explaining the higher purpose of their activities.

Last of all, the research question focuses on the daily life perspective of the respondents in regards of the main activities. The social aspect is separated in online and offline relations. For creativity wizzkids the distinction between these two types of relations is blurred, making online relations similar to offline friendships. In most cases, the online relation is more important to them in regard of the main activity. For exceptionally creatives, offline relations are considered more important which interrelates with the role of being a leader in the direct social network. In the amount of time spent on the activities, creativity wizzkids make a considerably larger investment of time and effort to undertake activities when compared to exceptionally creatives.

This relates to the structure of multiple activities creativity wizzkids employ in order to achieve professional goals and their overall level of advanced competence. Profession is also of importance when looking at the role of the main activity in daily life. Creativity wizzkids feel intertwined with their activities, describing a feeling as part of self. For exceptionally creatives the main activities are important and have a priority but balanced with regards to other activities in daily life.

From a methodological point of view, Roxy was used in this study to overcome a methodological challenge; actual online activities were observed and logged without taking the respondents out of the natural environment in which these activities are deployed. The robust data were covered more in-depth during the interviews conducted at home, most of the time in their rooms – this also strengthened the sense of natural surroundings. Respondents explained factual activities, some of which they had forgotten they had undertaken online or did not consider to be a priority. This led to rich conversations on how multiple internet websites worked in tandem with activities employed elsewhere online. Roxy worked in tandem with the in-depth interviews and CCM. Whereas Roxy did not immediately indicate routines per respondent or similarity in pattern of activities for all respondents, CCM illuminated the structure through constant comparison at different levels.

I started this research project with the aim to provide an empirical contribution to the insights in the exceptional online creativity by teens. Returning to the academic paradox, due to a misunderstanding of intense and skilled online activities in research designating the cyberkid labels, the younger generation is characterized as a whole, whereas an analyses of teens as individuals is more appropriate as they are part of a heterogeneous minority. The results convincingly show the complexity of exceptional creativity and the structured scope of complementing activities needed to deploy such activities, thereby demonstrating two levels of intensity.

Representing the small part of the younger generation capable of exceptional creativity, the respondents partaking in this research make evident how we as researchers need a perspective focused on individuals and need to understand the importance of personality and talent – a call for more in-depth empirical research on the dynamic online activities by internet savvy teens.

Discussion

Recent developments with regards to the use of the Roxy program need to be noted here. The Roxy program is able to log “http” web-links. Web-links starting with “https” account for better security and most online venues have made a shift towards this new format. In terms of this research, this means that Facebook, Twitter and Google have not been logged through Roxy. As social networking sites have significant value to this research, the reporting on the share of social networking sites in the overall daily online activity has been discussed in the follow-up interviews.

For future research, Roxy can be valuable to explore YouTube behavior in more depth. What we have seen in this study, gamers in particular use YouTube to gratify multiple purposes with regards to gaming such as social interaction, self-education, entertainment, exploration and as inspiration. Roxy allows the researcher to track a respondents’ activity from website to website, but also within one website specifically. As such, by retrieving the path of clicks within the YouTube platform and discussing the importance of the different type of YouTube videos in follow-up interviews, gamer behavior in regards to this medium can be understood more accurately due to the robust data.

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APPENDICES

Roxy results

<https://www.dropbox.com/home/2015%20rMA%20rrv%20jj/3%20-%20Roxy%20data>

Interview guides

<https://www.dropbox.com/home/2015%20rMA%20rrv%20jj/2%20-%20Interviews/interview%20guides>

Interview transcripts

<https://www.dropbox.com/home/2015%20rMA%20rrv%20jj/2%20-%20Interviews/interview%20transcripts>

Audio files

<https://www.dropbox.com/home/2015%20rMA%20rrv%20jj/2%20-%20Interviews/interview%20audio%20files>

CCM

<https://www.dropbox.com/home/2015%20rMA%20rrv%20jj/1%20-%20CCM%202015>