

Digital Sovereignty of Adolescents

Abstract

This paper takes up the approach of individual Digital Sovereignty and develops a first systematization of the concept. It defines it as all the abilities and opportunities a person possesses to realize his/her own plans and decisions in dealing with or depending on digital media in a competent, self-determined and secure manner and against the background of individual, technical, legal and social conditions. The significance of individual Digital Sovereignty for adolescents is illustrated by the results of an exploratory study in which we conducted group discussions with 106 eighth-graders of different school types. Results show that most adolescents have only a vague notion about their own data traces and the use they are put to. Only a small number of seven pupils – the whizzes – stood out due to their extraordinary understanding and deep reflections on digital media.

Zusammenfassung

Der Beitrag greift den Ansatz der individuellen Digitalen Souveränität auf und entwickelt eine erste Systematisierung des Konzepts. Er definiert Digitale Souveränität als alle Fähigkeiten und Möglichkeiten einer Person kompetent, selbstbestimmt und sicher eigene Handlungsentwürfe und -entscheidungen im Umgang mit oder Abhängigkeit von digitalen Medien zu realisieren. Digitale Souveränität ist relational. Sie hängt neben individuellen von technischen, rechtlichen und sozialen Bedingungen ab. Welche Bedeutung individuelle Digitale Souveränität für junge Menschen hat, zeigen die Ergebnisse einer explorativen Studie, in der Gruppendiskussionen mit 106 Achtklässlern verschiedener Schultypen durchgeführt wurden. Sie verdeutlichen, dass die meisten Jugendlichen nur eine vage Vorstellung von ihren eigenen Datenspuren und deren Verwendung haben. Nur eine kleine Zahl von sieben Schülerinnen und Schülern – die Cracks – zeichneten sich durch ein außerordentliches Verständnis und Reflexionen über digitale Medien aus.

Keywords: Digital Sovereignty, data sovereignty, adolescents, group discussion

1 Introduction

Young people are “permanently online, permanently connected” (Vorderer, Hefner, Reinecke & Klimmt, 2018) and use digital media as a matter of course to work on

school tasks, to shape their everyday lives and to support their own development (also see Jenkins, Itō & boyd, 2016; Livingstone, 2013; Turkle, 2011). Although almost all adolescents have Internet access and Internet-enabled devices at home, the extent of usage varies (Smahel et al., 2020, p. 18). Empirical studies on adolescents' media behavior are mostly limited to media usage and personal competencies. External factors, such as technical options or legal conditions, are set as given. Schorb and Wagner (2013, p. 18) underline that while living in a society marked by a pervasive mediatization a sovereign lifestyle is increasingly characterized by shaping one's own life with and through media. Therefore, Digital Sovereignty extends beyond media literacy: it helps to develop one's individual potential and thus enables participation in society (Jörissen, 2019). The present contribution takes up the approach of individual Digital Sovereignty and develops a first systematization of the concept. In an explorative study, group discussions were conducted with pupils in eighth grade. The aim was to uncover their subjective theories about Digital Sovereignty. One group of young people whose lifestyles show characteristics of Digital Sovereignty stood out. The article illustrates how they differ from the remaining adolescents.

2 Digital Sovereignty – a relational concept

Digital Sovereignty (Jörissen, 2019) is essential in a deeply mediatized world (Hepp, 2018). Asking how people can adequately implement their own plans for action in a deeply mediatized world, the *German Bildungstheorie* (see Kammerl, 2011) plays a central role in German-speaking countries. In the international context, the discussion is primarily reflected in the concepts of *media literacy* and *media (literacy) education* (see Jenkins, 2009). Both traditions of analysis (German and international) focus on the question of what the individual needs or can do in order to realize his or her own ideas and wishes in a world shaped by digital media without suffering any damage. Various authors discuss media literacy as a question of empowerment (see Hobbs, 2008) or as a possibility for civic participation (i.e. Mihailidis, 2019). Nevertheless, the approaches remain at the micro level of individual perspectives. By contrast, Zorn (2015) points out that individuals acquire a self-determined use of data processing media hardly or not at all – even with a very competent, enlightened attitude towards media use. Brüggem (2015) emphasizes that in order to shape one's life with media in a sovereign way, it is important to assume self-responsibility. However, this should not be the only point of reference. So far there has been no systematic analysis of exogenous factors with regard to the ability to shape one's own life in a deeply mediatized world. To address this open question, we propose the concept of individual Digital Sovereignty. Since the attempt to achieve Digital Sovereignty is embedded in complex social contexts (Brüggem, 2015, p. 57), it is pivotal to perceive it as a relational concept and to consider exogenous factors that influence our dependency on digital media or our actions in dealing with them.

Hepp (2018) describes the differentiation of technical devices, an increase in connectivity, the omnipresence of digital media, an accelerated innovation density, and the comprehensive datafication of almost all human communication as the main trends in this context. Up to now, however, technical conditions of media usage only featured as a subset of individual competence in empirical studies. Although user interfaces are becoming more user-friendly, the underlying (technical) processes are becoming increasingly complex and thus incomprehensible (e.g. Matzner & Richter, 2017). The extent to which users think about the technical conditions of their media activities and perceive them as a restriction to their personal freedom and/or as personal comfort has not been scientifically assessed so far (Freiling, 2019).

Besides, the legal framework is a further external factor that governs action in a deeply mediatized world. Data protection, personal rights and copyrights as well as youth media protection provide the legal framework for media activities. Compared to technical development, however, law is continuously lagging behind (see Cap, 2017). Against the background of globally operating technology companies, privatization of law enforcement and incapacitation of citizens characterize jurisprudence (Hofmann, 2019). Online users increasingly feel helpless in the face of data collection by companies and states (Stoilova, Nandagiri & Livingstone, 2019; De Mooy, 2017). As a result, a contradiction called privacy paradox gets more and more common (e.g. Schicha, 2019). In consequence, users of digital technologies employ few or no security measures to protect their own data despite a realistic or increased perception of risk on the Internet (DIVSI, 2018, p. 13). Legal conditions are also rarely related to media use; thus, it remains unclear how they influence the media related activities of online users. However, a guaranteed security of online activities involving personal data is fundamental for allowing adolescents to trust in digital technologies.

A third type of external influences on Digital Sovereignty is social conditions. The authors investigated the role that media play for socialization processes, family life and children. They found out that i.e. power, rules or bonds between people characterize social contexts and thus influence communicative practices (Kammerl, Müller, Lampert, Rechlitz & Potzel, 2020). For example, parents provide their children with a media ensemble and regulate access to it through parental mediation practices (ibid.). When transferring this approach to the Digital Sovereignty of adolescents, the social pressure they are subjected to when dealing with digital technologies is particularly noticeable (besides the influence of parents) (see e.g. Agosto & Abbas, 2017; Marwick & Boyd, 2014). Many young people believe that they are faced with the choice of either bowing to this pressure or running the risk of becoming socially isolated.

It becomes clear that a look at the media literacy of adolescents is not sufficient to judge whether they are able to successfully implement their own plans for action with digital media according to their own wishes in a self-determined way. It is also necessary to assess individual competence, self-determination and confidence in using digital technologies. To summarize the assumptions presented above, we define indivi-

dual Digital Sovereignty as the sum of a person's abilities and opportunities to realize his/her plans of action and decisions that deal with or depend on digital media in a competent, self-determined and secure manner. Since Digital Sovereignty is relational, it goes beyond media literacy and depends not only on individual, but also on technical, legal and social conditions (see also Stubbe, 2017).

3 Methodological approach

Since only a few theoretical models and empirical results in the field of Digital Sovereignty are available yet, the research group chose an explorative qualitative approach in order to gain a highly differentiated insight into the field. The focus was on the age group of adolescents. This is a particularly interesting phase of socialization to study Digital Sovereignty, as it is an age in which self-determination increases (Hurrelmann & Quenzel, 2012). Moreover, adolescents use digital technologies on a daily basis (Smahel et al., 2020) and are the target group of both digital technology companies and a variety of educational efforts.

The following results were collected during group discussions (Lamnek, 2005) with overall 106 adolescents at five schools in the metropolitan area of a large German city. From each school, one class of eighth graders was selected (age of the respondents about 14 years). The focus of the sampling was on basic secondary schools and grammar schools. A pretest was conducted with eighth grade students. Four to eight students per group discussed the topic operationalized as the use of digital media, personal negative experiences, experiences of third parties, knowledge about un-experienced dangers, strategies for dealing with them, and subjective feelings. Mostly the teacher divided up the groups spontaneously.

The guideline for the discussions was partially standardized after the pretest. The recorded discussions were transcribed and evaluated with the help of qualitative content analysis. For this purpose, deductively derived categories were first formed from the theoretical preliminary considerations, which were successively expanded inductively during the evaluation to form a comprehensive category system (Kuckartz, 2018). From this, typical phenomena of Internet use, specific (action) strategies and subjective theories of adolescents could be identified.

Subsequently, a type-building text analysis was conducted (Kuckartz, 2018, pp. 143–144). The attribute space can be divided into the following three subject areas: topics and knowledge introduced into the discussion; the young people's strategies for action and their consequences; locus of control. Thus we identified four different types of users/adolescents: The *clueless*, the *ignoramus*, the *frightened* and the *whizzes*. The *whizzes* are of particular interest for the present research question, as they stood out in this exploratory study. In order to highlight the special nature of this group, the other three types, are presented together in chapter 4, followed by the *whizzes* in chapter 5.

4 Subjective theories of Digital Sovereignty

The following description summarizes our results with regard to individual, technical, legal and social conditions of Digital Sovereignty. Here, we can only provide an outline that highlights the extent to which the ideas of most adolescents differ from those of a few *whizzes* (see chapter 5). In the group discussions, the adolescents describe a range of different situations they experienced in the context of digital media. These are particularly often related to questions of data protection, storage and exploitation. The sharing of images plays a prominent role here. The second important topic for adolescents is the receiving of unwanted content. They repeatedly address unwanted advertising and pornographic content. Besides these topics, some adolescents also describe cyberbullying and the danger posed by viruses, social bots or the dependence on digital media.

At the level of *technical conditions*, it is particularly noticeable that most adolescents' attitude ranges from naivety to excessive perception of danger: The vast majority does not mention technology companies in the digital sector with regard to their use of digital media. Those who do talk about them or their offerings, however, perceive them as extremely potent opponents. They suspect, for instance, that companies such as Apple listen in on all their conversations (see B60, 18:54) or that Alexa holds control over their house (see B15, 25:06). In contrast to them, they feel powerless: "But it just wouldn't work, that/that is, it would never work that all companies listen to it, that they don't listen in on anyone anymore." (B10, 13:42)¹⁾

Young people also hardly concern themselves with the *legal conditions* of their own media use. No mention is made of young people's personal rights, the right to their own image or copyright, nor of the discussions on the reform of EU copyright law that took place at the time of the interviews.

State institutions are mentioned even less frequently than technology companies. Moreover, they are unrealistically included into conspiracy scenarios by individual adolescents, which is illustrated by the following statement: "But this is the point with all major governments of all major countries, Germany, USA, China, Russia, it doesn't matter at all, they only care about profit, nothing else." (B38, 30:37) It is obvious that adolescents lack basic knowledge about social contexts. Accordingly, they do not establish any links between state institutions and their own media activities.

The *social conditions* of their own media usage were the most frequently discussed topics. Most statements were related to their own direct social environment, especially the adolescents' peers are important. As (best) friends, they are sometimes the only ones who can see all their profiles and all posted pictures. But class mates or school mates with whom they are not friends are mentioned likewise. They send contact requests, set deterrent examples by publishing embarrassing pictures or are mentioned

1) The group discussions were originally held in German. All citations were translated by the authors.

in the context of bullying – as perpetrators or victims. A frequently mentioned danger is that their pictures or content could fall into the wrong hands (of other peers).

‘Strangers’ were other frequently mentioned actors from the adolescents’ social environment. Although mentioned in almost all group discussions, most adolescents were not able to define them more precisely. These strangers featured mainly in two fields of activity: Some were named “hackers”. The adolescents could not say what a hacker was for them: “Well, most hackers are people who have nothing to do.” (B77, 32:07) They were mentioned repeatedly in connection with data and profile theft. “They hack into your account and then post pictures that [...] you didn’t want to post at all.” (B18, 12:44) Hackers have something ‘evil’ in mind from the perspective of most adolescents. Young people see few opportunities to defend themselves against them.

Other strangers were mentioned with regard to undesirable media content – especially pornographic content. In this context, different persons were alluded to who all had in common that they were unknown to the adolescents. On a theoretical level, they talked about the fact that ‘pedophiles’ (e.g. B3, 8:47; B5, 8:26) could be at work on their social media profiles. Some young women also reported concrete experiences where they received unsolicited ‘dick pics’ from men or other adolescents.

While the young people feel helpless in the face of some phenomena described, they have developed *concrete strategies* for others that help them to navigate safely through their digital everyday life. The aim is to remain anonymous or to protect their own data – but mostly not from companies or governmental access but from classmates or other peers. For the most part, the adolescents fall back on the privacy settings provided by the digital services (e.g. B1, 21:25). Certain information, such as addresses or telephone numbers, they generally prefer to keep secret (B30, 9:50). Some of them also insert false data (B38, 23:43). Some adolescents see it as crucial not to share their location continuously via social services such as Snapchat and disable the corresponding function. Others are not even aware that permanent location sharing is pre-set in this application. In this discussion, the adolescents feared most to let burglars know that they are not at home (B25, 28:26). Finally, strategies to avoid unpleasant notifications emerged repeatedly in the discussions. Particularly in the context of unwanted pornographic content, the girls reported that by blocking the perpetrators’ profiles, they were protecting themselves from further pictures and contact.

Besides these three strategies, the group discussions revealed a largely unreflected or little reflected approach to digital media. Some adolescents did not seem to have any strategies for action – or to recognize the need for such strategies. The majority used one or several of the three central strategies described. These youths perceived themselves as competent in dealing with digital media. Active actions (such as goal-oriented profile settings) or omissions (such as refraining from posting pictures) created a feeling among these adolescents that they could (at least partially) retain control over their own data. However, the majority has only a vague idea about their own data traces and

the way they are used. The adolescents report that they receive little support from school or parents.

Only a very small group of adolescents stood out because of their particularly reflective view on their own use of digital media. Since their perspectives clearly go beyond the knowledge and abilities of the other adolescents, we named them *whizzes*.

5 Digital Sovereigns: the whizzes

The *whizzes* are a very small group of adolescents who were particularly well informed about issues of Digital Sovereignty and were extremely confident about their own data: only seven people can be regarded as members of this group. They attracted our attention due to their extensive knowledge and their strategies for action. It became clear that – in contrast to their classmates – they had a broad view on individual, technical, legal and social conditions. *Whizzes* are characterized by a high technical affinity. During the group discussions, they took up corresponding topics and elaborated on them.

It is remarkable that all *whizzes* in the group discussions address technical conditions of media activities. Their perspective extends beyond that of their peers. They criticize in particular the monitoring or data processing by digital-technological companies (B6, 8:37) and discuss their economic model (B13, 14:25). They are aware of the current discourse on data storage, trading and sales and explain it by means of current events.

When referring to legal aspects, the *whizzes* often express criticism of (not yet) mature legal regulations. For example, they say that a general monitoring of all users would not be necessary to prevent cybercrime (B27, 25:31). International issues are also questioned critically, such as the face scanning and fingerprint system in the USA or the increasing everyday surveillance and the associated evaluation of Chinese society (B28, 2:07; B36, 18:30). But the *whizzes* go beyond this knowledge and demand legal restrictions for large corporations on an international level (B36, 3:03).

Finally, social conditions play a central role for the *whizzes* when dealing with digital media, too. Here they show a much more reflective approach than their school mates. For example, they talk about social pressure when dealing with digital media:

“In the end, data is stored that you only send to people you want to tell something to, for example. And, um, that you don’t necessarily want Facebook to know about because WhatsApp is part of Facebook. And, um, that’s why I’m always thinking about using an app other than WhatsApp, for example. The problem is that WhatsApp is used so much that you can hardly switch to another, uh, uh, chat platform. Um, because there are far fewer people, um, using it.” (B6, 05:32)

Besides, the *whizzes* also address the issue of self-care and narcissism. One student wonders at how much his peers hope to receive likes for their contributions and how disappointed they are if this does not happen. He sees the responsibility for this (also)

in the design of the platform itself (B21, 16:58), thus connecting the social condition with the technological condition.

These examples illustrate that *whizzes*, in contrast to other adolescents, reflect more strongly on the framework conditions for dealing with digital media. They also connect different conditions with each other. The *whizzes*' sovereignty can not only be derived from their knowledge, but also from their skills: They draw appropriate consequences from their knowledge to protect their data and develop concrete strategies for action. For example, the *whizzes* attach increasing importance to secure passwords (B6, 20:51). They use anti-virus programs (B27, 12:35) and are informed about unauthorized user access (B27, 12:35; B36, 19:02). But more 'radical' strategies are also mentioned: One student reported that he taped his smartphone camera to

"protect privacy, so I don't want that if I'm with my family somewhere or so, that any corporation sees what I'm doing or hears what I'm talking about or so. I want it to actually be private things like this." (B28, 00:19)

The strategies also include not using certain services: They refrain, for instance, from using apps that want to access their own location or their contacts (B28, 8:13). They delete social network accounts if they get too many messages from unknown users (B21, 19:33) or set them to private (B34, 5:43). And they also use alternative software providers that offer greater data protection (B34, 7:48).

From this outline, it becomes clear that the *whizzes*' handling of digital media is much more reflective and elaborated than that of other adolescents in their peer group. Unfortunately, the study design does not allow a statement about the reasons for their superiority in this matter.

6 Results and outlook

This paper provides a proposal for the definition of individual Digital Sovereignty. It defines this as all the abilities and opportunities a person possesses to realize his/her own plans and decisions in dealing with or depending on digital media in a competent, self-determined and secure manner and against the background of individual, technical, legal and social conditions. The article also provides initial insights into the perspective of adolescents on the topic of Digital Sovereignty.

They are confronted with various challenges regarding Digital Sovereignty and gain most of their experiences in dealing with digital media alone and in their free time.

Only few possess strategies to move competently, self-determinedly and safely through our deeply mediatized world.

The majority of the interviewees appear to have only a vague notion about their own data traces and the use they are put to. Their contributions to the discussions mostly refer to the level of individual conditions and they perceive hardly any (network-)political and legal fields of activity. They pay little attention to the role of digital technology providers. The pupils often see themselves in a passive and defenseless

role. They have developed different strategies for dealing with other users, especially parents and peers. Most of them hardly reflect on their own possibilities for action. It is noticeable that support offers are not an issue. Accordingly, it must be assumed that they are unknown or unavailable.

In comparison, the *whizzes* stand out due to more extensive knowledge and more elaborated strategies in dealing with digital media. They reflect on digital technologies and subject them to a critical assessment. They incorporate technical, legal and social conditions into their thoughts. In doing so, they not only perceive a variety of aspects through which the conditions influence the users themselves, but they also recognize connections between the conditions. With regard to individual strategies, they have access to a much wider range of possibilities and know about additional options.

The present study provides exciting results regarding the Digital Sovereignty of adolescents. As an exploratory analysis, however, it is also subject to limitations. It includes, for example, only a rather limited number of adolescents of one city and one age group. Moreover, the duration of the group discussions was rather short, averaging 20 minutes. There is a risk that some adolescents did not dare to express their opinions and perspectives in the group (for example due to their character or the group composition). Similarly, statements may have been influenced by social desirability (within the highly rated peer group). To overcome these limitations, further surveys are needed.

Despite these limitations, this study is able to show that, in a deeply mediatised world, the handling and use of digital technologies in order to realize one's own plans for action and decisions in a competent, self-determined and secure manner depends on a number of both individual and exogenous factors. It is therefore not sufficient to focus on the media literacy of adolescents alone. We need comprehensive discourses on how technical, legal and social framework conditions influence the opportunities for self-determined media use and the equal distribution of options for participation. Discourses on individual, technical, legal and social issues of life in a deeply mediatised world must be initiated

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