

Normative principles in newsroom innovation

The case of 360° video adoption by editorial knowledge champions

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Technology innovation adoption is critical for the survival of news organizations in the digital age. However, it has been argued that innovations should not be adopted at any price in journalism. This explorative study investigates drivers and obstacles for innovation adoption of 360° videos in eight news organizations in Switzerland from the perspective of the knowledge champion in the editorial office. Based on interviews, we find that the question of what an innovation will change regarding resources, processes, and the alignment to professional norms is relevant at an early stage of innovation adoption. Potential monetary, audience, and company image benefits of an innovation become relevant for its proficient adoption. Knowledge champions carefully evaluate the new technology against normative journalistic principles and benefits for the organization. We argue that for understanding innovation adoption in newsrooms, the negotiation of professional norms has to be considered as this negotiation can drive or restrain in-

novation adoption. As journalists do not innovate at any costs but consider journalism's societal purpose when assessing new technology, models of newsroom innovation adoption need to include the negotiation of normative principles.

Keywords

agents of innovation, immersive storytelling, journalism culture, newsroom innovation, technology adoption, video journalism

INTRODUCTION

News organizations have developed a constant desire to adopt technology innovations and experiment with all “shiny news things” (Küng, 2017, p. 7). Adoption of technology innovations is regarded a crucial success factor for news organizations since “the media industry is rooted in technology, and its fate is intimately connected to the path of technological innovation” (Küng, 2017, p. 103). The need to constantly

innovate is a narrative told by the technology companies of Silicon Valley (Russell, 2017). Creech and Nadler (2017, p. 182) criticize this “celebratory focus on innovation” in journalism because it “marginalizes normative concerns about journalism’s democratic purpose”, suggesting that normative principles collide with innovation adoption in newsrooms. Research into newsroom innovation adoption identified various obstacles, such as lack of resources, absence of leadership, lack of motivation, stagnation, and fear (García Avilés et al., 2019). A misfit with normative journalistic principles constitutes an additional obstacle for newsroom innovation adoption (e.g. Ekdale et al., 2015).

A key driver for innovation adoption is constant improvisation with technology by individuals (Orlikowski, 1996), such as a knowledge champion (Meyer, 2000). Knowledge champions can be “souls of fire” that proactively push the knowledge about

and the use of an innovation within an organization (Meyer, 2000, p. 328). Or knowledge champions have the power to challenge an innovation and can become “devil’s advocates” when they perceive negative effects (Meyer, 2000, p. 328). In news organizations, editorial knowledge champions are in a position to evaluate the compliance of an innovation with journalistic norms and to push or block innovation adoption in the newsroom.

Based on research on the innovation adoption process, this study sheds light on the role of normative principles in newsroom innovation adoption using the example of 360° video adoption. Digital technology enabled virtual reality and 360° videos as forms of immersive journalism. While virtual reality requires viewers to wear a headset, 360° videos have a lower consumption barrier since they can be watched on mobile devices. Viewers of 360° videos see footage in a 360-degree overview from the camera’s position, but they cannot explore and interact beyond that setting as in virtual reality. Central to both forms is the audience experiencing news from a first-person perspective (Baía Reis & Coelho, 2018), which has implications for news production and causes normative debates (Aitamurto, 2018; Doyle et al., 2016). Although early adopting news organizations across various countries produce 360° videos (Watson, 2017), the vast majority of newsrooms have

not adopted 360° videos. The objective of this study is hence to explore drivers and obstacles of 360° video adoption with a focus on editorial knowledge champions and normative principles.

We conducted interviews with eight editorial 360° video knowledge champions of national, regional, and local legacy and online-only news organizations in the German-speaking area of Switzerland, representing the organizational diversity in the Swiss news media landscape. The sample stands for a mixture of high and low resource news organizations, print, television, and online-only legacies. It covers 360°-video-enthusiastic as well as skeptical news organizations, allowing a balanced assessment of obstacles and drivers of 360° videos in a small media market.

LITERATURE REVIEW

Innovation adoption in news organizations

When deciding whether to innovate, organizations go through various stages. Based on Rogers’ (1995) diffusion of innovation theory, an innovation decision process begins with a knowledge stage, followed by a persuasion stage, a decision stage, an implementation stage, and ends with a confirmation stage. Determinants of these innovation adoption stages are located on the meso level of structures and processes of an organization as well as on the micro level of

employees (Slappendel, 1996). According to Frambach and Schillewaert (2002), innovation adoption is also determined by environmental influences such as competitive pressures and perceived innovation characteristics. Broadly speaking, the macro, meso, and micro levels as well as the characteristics of an innovation determine its adoption.

On a micro level, innovative individuals and their perception of an innovation drive or block the initial adoption of a new technology. Such individuals are decisive for leaving the knowledge stage and proceeding to an implementation stage. They often take the role of a knowledge champion in a company and are the first to seize opportunities of innovations. Sylvie and Moon (2007, p. 91) describe such champions as change agents in journalism who are “open, responsive, innovative, trustworthy, and sincere.” Lischka (2015) shows that such change agents are more likely to embrace multi-platform reporting than journalists who value innovation less. However, innovative agents who have the power to support innovations can become the agents to oppose innovations (Meyer, 2000). Opposing innovations is related to perceiving negative consequences for the company or its staff (Meyer, 2000). Taylor and McAdam (2004) emphasize that an innovation has to be perceived as bringing added value to the organization. That is, knowledge champions take a “gatekeeper” role in in-

novation adoption since the adoption depends on the evaluation of the individual champion. The technology acceptance model (TAM) identifies perceived usefulness, ease of use, subjective norms, and enjoyment of the innovation as important determinants of innovation acceptance on an individual level (Venkatesh & Bala, 2008; Venkatesh & Davis, 2000). Thus, innovation characteristics as well as normative evaluations are relevant for knowledge champions and thus the initiation of innovation adoption.

Research into newsroom innovation identifies drivers and obstacles on organizational and individual levels. Interviewing newsroom professionals, García Avilés et al. (2019) find that obstacles include lack of resources, absence of leadership, lack of motivation, stagnation, and fear. In contrast, drivers of innovation adoption esteem investment, leadership, motivation, trial and error, as well as creativity. Yet, there has to be a positive organizational or societal outcome of an innovation (Bruns, 2014) such as audience growth, process improvement, prestige, impact, user satisfaction and engagement, and revenue increase (García Avilés et al., 2019). These outcomes partly relate to professional standards such as social impact, which is a traditional news factor (DeVito, 2017), as well as user orientation. Thus, innovation projects are motivated by a combination of editorial, commercial, and organizational aspects (Sehl et al.,

2016).

The role of professional standards in innovation adoption

Newsroom innovation occurs in parallel to well-rooted practices and working procedures in which journalistic ideology becomes manifest (Lehtisaari et al., 2018). Thus, anything that induces change to working procedures is inevitably related to professional norms. Journalism research shows that editorial staff opposes changes in practice when professional norms are at risk (Ryfe, 2009; Singer, 2003, 2008), indicating that professional standards have a decisive role in innovation adoption. Thereby, traditional norms are renegotiated and adapted in digital journalism (Lischka, 2018; Robinson, 2010; van den Bulck & Tambuyzer, 2013), indicating that innovation adoption changes professional standards. In this sense, innovations require “changing mindsets, many times unlearning the trade and its institutional truths” (Lehtisaari et al., 2018, p. 1031).

Traditional journalistic norm conceptions relate to the Trustee Model (Schudson, 2011) with the ideals of representative democracy, in which journalism should produce news that enables audiences to educate themselves. The values related to the Trustee model are found to continuously frame journalism (Welbers et al., 2016) and supposedly its innovation

adoption. Concerning digital technology adoption, journalism research has shown that journalists express professional concerns and oppose innovation when perceiving to be hindered to produce good journalism. For instance, online editors consider the use of audience metrics for online news selection to be in conflict with professional norms (Welbers et al., 2016). Such professional concerns relate to the norms of fairness, accuracy, responsibility, as well as to role conceptions such as interpreting current affairs, disseminating information, and being adversarial (Agarwal & Barthel, 2015). In contrast, if an innovation is perceived as a catalyst to increase journalistic quality, this accelerates its adoption (Ekdale et al., 2015). Therefore, novel norms including audience orientation and engagement have developed in the digital age, in spite of the professional culture that is found to weaken the potential impact of technology towards an audience-orientation in journalism (Spyridou et al., 2013). According to Scacco, Curry, and Stroud (2015), audience engagement and outreach have become part of journalists’ digital roles. For instance, editors post content on social media that affects as many users as possible to maximize engagement (Neuberger et al., 2014). Thus, journalists may not easily compromise professional norms when innovating.

Innovation adoption of 360° videos

Comparing the development of 360° videos to the stages of innovation diffusion (Rogers, 1995), the knowledge stage has passed and news organizations are aware of 360° video technology. However, since not every news organization has adopted 360° videos (Watson, 2017), interorganizational differences on the persuasion stage and following stages can be expected.

360° news videos are a novel format for immersive storytelling. The new format changes content characteristics and consumption. “Storyliving” instead of storytelling is described as the major advantage of 360° videos for journalism (Google News Lab, 2017; La Peña et al., 2010). The immersive character of this format is regarded as one solution to increase loyalty of news users since it can “elicit a connection between the audience and the news story” (La Peña et al., 2010, p. 291). Aitamurto (2019, p. 4) argues that 360° video can present more information than traditional video because of its omnidirectional view, and “its immersive features can strengthen the viewer’s sense of presence.” That is, 360° video is suitable for news making in digital journalism where user orientation and engagement are increasingly important professional values (Scacco et al., 2015).

Previous research confirms that 360° video adoption follows common innovation adoption patterns.

For instance, a knowledge champion is crucial as an initiating force. Watson (2017) emphasizes that curiosity and willingness to experiment with virtual reality technologies of individual journalists are important for adoption.

Previous research finds applied, procedural, business, and normative drivers and obstacles regarding the adoption of 360° video in newsrooms. A survey with legacy and online-only news organizations and hardware producers in the US shows that costly and time-consuming production, limited accessibility, ethical considerations, presentation of a narrative structure, unclear technology development, and unclear monetization were seen as obstacles to the adoption of virtual reality in journalism, including 360° video (Doyle et al., 2016). Hardee and McMahan (2017) report that journalists find 360° videos applicable for breaking news stories as well as explanatory reports and features. Thus, the scope of application is broad for journalism, which should drive adoption. Regarding procedural issues, the collaboration with the technology supplier enabled investing into the technology for *The New York Times*, for instance (Küng, 2017, p. 23). In contrast, *The Economist* decided not to use 360° videos because they did not find a third party to cover the expenses (Küng, 2017, p. 23). 360° videos have the least production and consumption costs of any virtual reality format and can

be viewed on various channels and devices, including personal computers and cell phones (Hardee & McMahan, 2017), and the costly and time-consuming production and postproduction processes have improved (Sirkkunen et al., 2016). Therefore, procedural and resource aspects may become less relevant in the adoption decision. Further, adopters want to explore associated revenue models (Watson, 2017).

Besides such aspects on a management level, normative issues are relevant for the adoption of 360° videos, which are related to the immersive consumption characteristics of the format. Ethical considerations refer to a loss of journalistic control over the consumption situation since “a fully spherical view of a scene [is shown] without the ability for a journalist to focus an audience on a particular view” (Doyle et al., 2016, p. 5). Aitamurto (2019, p. 3) describes this ethical concern as a normative paradox for journalists because 360° video is supposed to provide a more accurate picture of a situation, but “the viewer’s freedom to choose the field of view can lead to a less accurate picture of the story.” Further, journalists try to achieve an authentic imagery with 360° video, which compromises traditional norms of accuracy and objectivity (Aitamurto, 2019). Aitamurto (2019) concludes that journalists renegotiate the normative boundaries of traditional journalism to adopt 360° videos. Moreover, values that have become rel-

evant in the digital age such as appearing innovative are found to enhance 360° video adoption (Watson, 2017).

Hence, previous studies have addressed the adoption process as well as obstacles and drivers for 360° video adoption. A knowledge champion has been identified as a “gatekeeper” for innovation adoption. However, it remains unclear how drivers and obstacles relate to a certain adoption stage and which role traditional and contemporary normative principles play on which adoption stage, according to the view of editorial knowledge champions. Thus, we ask the following research questions.

RQ1: What are drivers and obstacles of 360° video adoption stages in newsrooms in the view of knowledge champions?

RQ2: How do editorial knowledge champions negotiate normative principles in the 360° video adoption process?

METHOD

Country

Switzerland is a media market with a professional journalism culture (Brüggemann et al., 2014) where news is mainly consumed through public-service news, free boulevard news outlets, regional and local news outlets, and quality news outlets, both through

traditional channels and online (Newman et al., 2017, p. 97). Switzerland represents a media market with a small audience potential with about six million inhabitants in the German-speaking area. Most innovations are adopted by the four major news organizations Ringier, Tamedia, NZZ Mediengruppe, and the public-service broadcaster SRG SSR (Dal Zotto et al., 2017).

Sample

The sampling strategy of news organizations follows a criterion-based, purposive approach (Teddlie & Yu, 2007) with the goal to cover experience diversity regarding 360° video production and organizational diversity in the Swiss news industry. The sample includes news organizations that vary with regard to production frequency of 360° videos (no videos, low/seldom and higher/monthly); type (television and non-television legacies), size (small and large), age (young and old), as well as organizations with national and local regionality foci (see Table 1, next page). The produced 360° videos typically cover events such as carnival and a hot-air balloon festival, sports like skiing and bobsleigh, and documentaries, for instance, about police operations, hospital work, athletes, travel destinations, and the Alps. Consumption of popular 360° videos range from around 470,000 views on YouTube of an air force flight (*Blick*), 20,000 views

of an athlete documentary (SRF), 1,700 views of a cable car ride in the Swiss Alps (*Bote der Urschweiz*), and 1,500 views of a music event (TeleZürli) at the time of selection. Of the selected news outlets, previous research about the professional practice of video journalists from the local commercial television station TeleZürli (Dickinson & Bigi, 2009) and a virtual reality adaptation of the boulevard news outlet *Blick* (Watson, 2017) was conducted.

Interviews

Semi-structured expert interviews were conducted to reveal technological and experiential knowledge as well as knowledge based on interpretation and insights into organizational processes. Target persons were the knowledge champions within a newsroom who are responsible for 360° video news or newsroom innovation. This was usually one person in each selected news outlet. The job titles of the interviewees were head of video, head of online, editor-in-chief online, and expert of innovation. The age of interviewees ranged between 27 and 38 years. Two of the eight interviewees were female.

The interview guide covers questions about the background of the interviewee, initiating moments and experience with 360° video production, fields of application of 360° videos, market success of 360° videos, and their future potential in journalism. The

goal was to stimulate procedural and evaluative narratives from the experts regarding drivers and obstacles of 360° video adoption. To avoid overinterpreting the role of professional norms regarding the adoption process, this issue was not actively triggered but discussed after the interviewee referred to the topic. Since normative issues may be subject to social desirability, interviewees were sensitive to avoid guiding the interviews accordingly. Interviews were conducted in 2018 either face-to-face or, if preferred by the interviewee, on Skype and lasted between 40 and 62 minutes.

Analysis

The interviews were transcribed and qualitatively coded to inform the research questions. First, “thick” descriptions of procedural and evaluative descriptions of the adoption process of 360° videos in the newsrooms were developed based on the interviewees’ obstacle and driver narratives. Then, Doyle et al.’s (2016) challenges and opportunities of virtual reality in journalism guided the categorization of drivers and obstacles of 360° video adoption, including professional concerns. Next, the topics of professional concerns were classified based on previous research (Agarwal & Barthel, 2015; Aitamurto, 2019; Scacco et al., 2015). The analysis then compared the descriptions to Rogers’ (1995) innovation diffu-

Table 1: Sampled news organizations

News outlets (Parent news organization)	Description	Legacy	360° video production frequency¹	Type of 360° video produced	Adoption stage
<i>20 min</i> (Tamedia)	National boulevard	Print	Once	Advertising	Awareness
<i>Blick</i> (Ringier)	National boulevard	Print	More than once a month	Sports, events, sights	Proficiency
<i>Bote der Urschweiz</i> (Bote der Urschweiz)	Regional newspaper, radio, TV station	Print, broadcasting	Monthly	Local events, local sights	Proficiency
<i>Nau.ch</i> (Nau media)	Online start-up	Online	None		Awareness
<i>NZZ</i> (NZZ Mediengruppe)	National quality	Print	None		Awareness
<i>SRF</i> (SRG SSR)	Public service broadcaster	Broadcasting	Monthly	Documentary	Proficiency
<i>Südosstschweiz</i> (Somedia)	Regional newspaper	Print	Seldom	Events	Experimenting
<i>TeleZüri</i> (AZ Medien)	Local private TV station	Television	More than once a month	Events, documentary	Proficiency

Note. 1) According to information provided in interviews

sion stages and identified which issues are prevalent at which stage. Finally, driving forces and obstacles were ascribed to each stage.

FINDINGS

Normative principles

Interviewees often talked about technical concerns first and then turned to normative professional concerns regarding the adoption of 360° videos. Professional concerns refer to the disseminator role of journalism and to journalistic autonomy, which are regarded as a disadvantage to 360° videos. On the other hand, a positive normative aspect of 360° videos is the increase of audience utility. Further, 360° video is related to innovativeness as a value for journalism.

Disseminator role. Most interviewees were concerned that 360° videos hinder information dissemination. This attitude is caused by the time-consuming production process. The interviewees considered 360° video production to be in opposition to time pressures in the daily news business: “Even the worst 360° video takes longer than writing a text” (NZZ) or producing a “flat” video. That is, 360° videos are perceived to be produced at the costs of regular news in standard formats, which compromises the purpose of news organizations to provide news promptly to their

audiences. Another aspect is that more information is captured in standard formats and thus “you can tell stories faster with a flat video” (SRF). Moreover, the audience reach of 360° videos is lower than for standard news formats. Not catering to the potentially largest audience is not acceptable to many interviewees: “We have the interest to inform as many people as possible with the information we got. That’s why I decided that we will not test 360° video” (NZZ). Thus, standard formats better suit the disseminator role due to the higher amount of captured information and a higher audience reach. This concern represents an obstacle for 360° video adoption.

Journalistic autonomy. The greater level of freedom for users of 360° videos compromises journalistic control over the content consumption. That users of 360° videos freely decide which direction to look interferes with journalistic freedom to select the view of the user. One interviewee (*20min*) was concerned about the loss of journalistic autonomy in comparison to regular videos where the camera shooting direction equals the view of the user: “360° takes the autonomy of the cameraman, of which the audience gets hold of then,” he explains. However, the interviewee concluded, this loss of influence can be compensated by guiding the viewing direction with additional comments and text within the video. This solution allows some control over the consumption.

Therefore, this aspect is not regarded as an obstacle for 360° video adoption.

Audience utility. The interviewees regarded the greater audience utility as a major advantage to 360° videos. Audience utility is ascribed through the immersive characteristics of 360° videos, including emotionality, comprehensibility, involvement, presence, and technology fascination. The *Blick* interviewee states, “I can explain things much better and users can comprehend much better. Stories become more comprehensible, experienceable, more emotional. This is a great utility we journalists can give to our users.” Moreover, users’ involvement is greater during the consumption, that is, “you are deeper in the story with 360°” (SRF). Lastly, 360° videos offer users a presence in places and in situations they would not experience in their regular lives.

Greater audience utility can also increase information reception and thus partly compensate for a lower degree of information dissemination of 360° videos. The *NZZ* interviewee, who regards the dissemination role as very relevant, assumes that when users are involved while watching a 360° video, the information reception increases: “If you accomplish to affect people, then you will get their attention. This is the very moment you can convey information and explain, which is the central task of journalists.”

Innovation. Interviewees expressed concern

about the role of journalism in society in general. They regard 360° videos as a means to signal technology competence to the audience and an opportunity to attract new audiences that are technologically fascinated. Furthermore, 360° videos are regarded as an important innovation signal from the news brand. The *Bote* interviewee outlines that they can show that they are technically up-to-date. The *TeleZüri* and *Blick* interviewees emphasize that publishing 360° videos indicates being an innovative news brand that differentiates from legacy news organizations and online news outlets. To remain innovative in organizational processes and attain an innovative news brand image was the reason *Blick* adopted 360° videos proficiently: “It can be a chance for a media house, a brand, to appear innovative.” Similarly, the *TeleZüri* interviewee states, “We want to show what we have, what we can. We must be different from normal online portals in terms of quality and the state of the art. Otherwise, television will not have a chance in the future.”

By new technology adoption, the interviewees feel that journalism and its stories remain important to audiences in the digital age. The *TeleZüri* interviewee concludes, “Journalism must not block technological progress that addresses storytelling. Only this way, journalism remains relevant and needed.”

Innovation adoption process

The news organizations go through three adoption stages: the awareness, experimentation, and proficiency stages (see Table 1). The following sections describe the perceived drivers and obstacles for each adoption stage.

Awareness stage. The selected news organizations are aware of 360° video technology. The print-legacy quality news outlet *NZZ*, the print-legacy boulevard news outlet *20min*, and the online-only news start-up *Nau* remain at the awareness stage. For them, low market penetration, resource constraints, and normative concerns hinder the entering of the experimentation stage.

The market penetration in competing news organizations is considered to be low. Therefore, market conditions are no incentive to enter the experimental stage or go beyond this stage. “Maybe there is someone in Western Switzerland who does it or someone else I know. But not very many come to my mind. And that shows that too few are using it” (*Nau*). Also, the market penetration on the audience side appears to be low. There is too little content on the one hand and too little demand on the audience side as the technology has not yet arrived in private households, the interviewees explain. Thus, the low market penetration does not put pressure on news organizations to adopt.

Second, resource concerns relating to technological hardware and complexity, monetary investment, and editorial time and personal resources are described as issues by the interviewees on a low adoption stage (*NZZ*, *20min*, *Südostschweiz*). In contrast, the more experienced news organizations consider it cheap and uncomplicated to produce 360° videos (*Blick*, *TeleZüri*, *SRF*). The investment into the equipment is not regarded as too high and therefore not as risky for adopters: “A 360° camera is not an infinitely high investment. So, I said, come on, we buy it, we do it, we try” (*TeleZüri*). Thus, the interviewees differ in their perception of necessary resources to produce 360° videos according to the adoption stage.

Third, resource constraints are related to normative professional concerns. Due to the time-consuming production process, less time and staff are available for news making in standard formats, which interferes with the disseminator role, as described above. Although the news outlets are aware of the immersive characteristics that increase audience utility and partly compensate for the lower level of information dissemination of 360° videos, these advantages do not outweigh the disadvantages. These perceived disadvantages result in the decision not to regard 360° video as useful for the news outlet. The interviewees describe that 360° videos are not considered as suitable for the current strategy of the news organi-

zation: “We just did not prioritize 360° videos in our strategy during the past two years” (*20min*); “We are new and focus on informative news videos and live videos now.... 360° does not fit into our video strategy at the moment” (*Nau*); “Our goal is to explain the complex world with explanatory videos. Animation is our focus. This fits better to the background coverage of *NZZ*” (*NZZ*). Especially the *NZZ* explanation for not adopting 360° videos is grounded in normative concerns regarding the interpretive and disseminator roles.

Experimentation stage. Five out of eight selected news organizations entered the experimenting stage and one remains on the experimenting stage (*Südosstschweiz*, see Table 1). If the knowledge champions are persuaded by the benefits of the new format and can negotiate or solve professional concerns, they carry their persuasion forward into the news organization and enhance the adoption process to the experimenting stage.

Therefore, competency is configured. That is, either competencies exist or need to be acquired. For instance, *Blick* realized existing competencies after the decision to use 360° videos. If there is no existing competency, it is acquired through collaborating with an external expert (SRF) or through acquiring the skills for oneself, for instance through online tutorials (*TeleZüri*, *Bote*, SRF).

The experimenting stage is regarded as an opportunity to collect early experience with the new format: “If you begin early with virtual reality, you want to collect experience” (*Blick*); “One should embrace new technologies and try it out and look at it. Even just for the great fun of it” (*Südosstschweiz*). To experiment with a new technology fascinates also news organizations that remain on the knowledge stage: “I think it is extremely exciting how many news organizations experiment with virtual reality or 360°. I can see that there is curiosity” (*NZZ*).

On the experimenting stage, revenue concerns become relevant for the news organizations. If the format is not considered to have potential for monetary success, the news organizations more likely remain on the experimenting stage. The success ascription during the experimenting stage determines whether a news organization enters the proficiency stage. For instance, *Blick* experienced great success: “The first video that we uploaded went through the roof. The next ones as well. These are the most successful videos we have ever produced until today.” In contrast, the *Südosstschweiz* interviewee regards the opportunity for audience reach as low as they have not seen a highly trending 360° video recently or realized audience demand: “It’s not that people scream for it.” Therefore, economic results are not expected, “Either exposure time or click rates have to increase. You just

don’t produce that for fun” (*Südosstschweiz*). Positive economic results are not regarded as realizable.

Proficiency stage. Four of the sampled news organizations entered a proficiency stage characterized by a medium- or high-frequency regularity of 360° video production. *Bote* and SRF produce one video per month, and *Blick* and *TeleZüri* produce more than one video per month (see Table 1). *Blick* and *TeleZüri* explained that their goal is to produce one 360° video per week soon. On the proficiency stage, 360° videos have become part of the standard video portfolio. An editorial concept is developed (*Blick*, *Bote*) and 360° videos are implemented in the processes of news video or online team (SRF, *Bote*).

For *Blick*, the proficiency stage began with an initiative to give away 36,000 VR card board glasses in a special edition and the launch of a VR app. Initially, the proficiency stage was regarded a manageable risk for which the necessary decidedness was easy to raise:

Of course, we had the feeling that if it does not work, we do not have such a great loss. This makes it easier. But you must have the courage to make it really big.... This is part of the culture of our company.

Driving forces into the proficiency stage are the experiences of success or potential success on the audience or advertiser markets. Only *Blick* was mon-

etarily successful on the advertiser market. The *Blick* interviewee reports that their VR app “got into the black right away” because they developed a new revenue stream through native advertising and branded content with the app. The retrospective success narrative of the *Blick* interviewee is extensive:

It is inconceivable. It was very good for *Blick* because it was something that you did not expect *Blick* to do.... Yes of course, it was worth it. It was regarding reach, regarding revenues, regarding reputation. And there is no topic I have spoken more often about than about the 360° in the past one and a half years, internationally.

Also, TeleZüri views success on the audience market as an important potential of 360° videos: “You can tell advertising clients about a creative way in 360° and integrate them.” Similarly, the *Bote* interviewee explains that the publisher was hoping to raise interest among advertising clients, which however has not yet happened.

Besides audience and monetary success, news organizations who routinely use 360° videos recognize an innovative image as benefit for their news organization, as described above. These normative issues function as incentives to remain on the proficiency stage.

In sum, news organizations on the proficiency

stage attribute success to 360° videos, perceive manageable risks, and regard offering a greater audience utility as well as realizing an innovative image as benefits for their news organization.

DISCUSSION AND LIMITATIONS

This study categorizes news organizations to innovation adoption stages based on the application of 360° video production for news and analyses drivers and obstacles for each adoption stage. We separate the adoption process into the awareness, experiment, and proficiency stage. Thereby, we deviate from Rogers’ (1995) innovation decision stages as we do not further differentiate the persuasion stage and the experimenting stage. Also, we differentiate between experimental and proficient implementation, with the latter corresponding to Rogers’ confirmation stage. No differences are found regarding the awareness stage: 360° videos are well-known across the sampled news organizations. The news organizations figure out the actual potential of 360° videos for their audience and advertiser markets and their news reporting situation.

Findings confirm that knowledge champions and their perception of an innovation are relevant for initiating innovation adoption. Agents with the power to drive innovations can also oppose them and remain on the awareness stage (Meyer, 2000). Knowledge

champions need to regard the technology innovation as fitting to the company strategy and professional standards in order to be persuaded by an innovation, confirming Ekdale et al.’s (2015) findings. Besides compliance with strategically relevant professional standards, drivers for entering the stage of experimenting with 360° videos include realizing first-mover advantages in a market situation with low competitive pressure and perceiving the technology as simple and inexpensive. Obstacles for experimenting include lack of competitive pressure, the perception of the technology as complex and expensive, resource scarcity, and professional concerns. That is, market condition, technology characteristics, and normative issues determine whether a knowledge champion is convinced by 360° video and decides to adopt it in order to experiment. Hence, influences on the market environment, the innovation itself, and individual assessment determine innovation adoption, in line with previous research (Frambach & Schillewaert, 2002; Venkatesh & Bala, 2008).

Professional concerns relating to 360° videos mostly addressed the role of being an information disseminator and the desire for journalistic autonomy. Knowledge champions assessed 360° videos as compromising efficient information dissemination and decreasing the level of journalistic autonomy. These aspects were also issues of concern in previous

research (Aitamurto, 2019; Doyle et al., 2016). In the present study, compromising information dissemination led to the decision not to adopt 360° video. In contrast, the decrease of journalistic autonomy could be negotiated and did not hinder innovation adoption. Thus, if professional concerns cannot be renegotiated, these serve as obstacles to innovation adoption.

Findings also suggest that 360° videos enhance professional values of being innovative (Küng, 2017) and oriented towards user benefits and engagement (Scacco et al., 2015). Through enhancing an innovative image and audience utility, 360° videos in particular and technological innovations in general were portrayed as crucial for the societal relevance of journalism in the digital age by adopters. Therefore, professional values can also support innovation adoption.

Drivers for the routine use of 360° videos are the perceived revenue potential, an increased audience utility, and an innovative image of the news outlet. This is in line with the finding that innovations have to be perceived to add value to the organization in order to be adopted (Bruns, 2014; Taylor & McAdam, 2004). Obstacles are, in turn, the perception of no revenue potential and low demand of 360° videos. Figure 1 summarizes drivers and obstacles for the adoption stages of technology innovations within

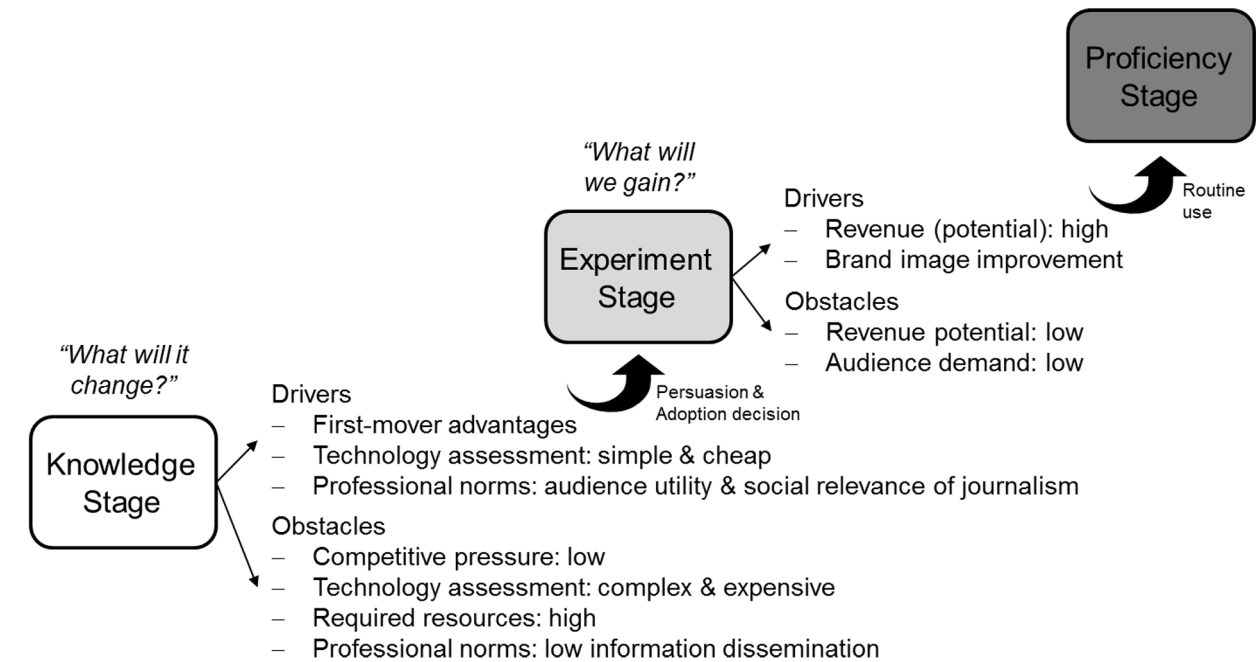


Figure 1: A model of innovation adoption in newsrooms.

news organizations in a tree model.

Major differences between the news organizations across the adoption stages lie in the perception of the required resource intensity, revenue potential, as well as the potential to enhance or compromise normative principles. Similar reasons are reported in Doyle et al.'s (2016) study of obstacles regarding virtual real-

ity adoption in journalism. However, the role of normative principles is found to determine innovation adoption. This finding extends the TAM (Venkatesh & Bala, 2008), suggesting that professional norms play a role for technology acceptance.

In line with García Avilés et al.'s (2019) model of diffusion of media innovations, the present study

finds lack of resources and lack of motivation as obstacles. A lack of motivation results from the complexity assessment of the innovation technology and its misfit with professional values. The motivation may be equivalent to Rogers' (1995) persuasion stage, which results from the negotiation in the awareness stage. However, market conditions such as the perceived competitive pressure and realization of first-mover advantages are not identified as drivers or obstacles in García Avilés et al. (2019). In our study, drivers of innovation adoption include benefits for the company and for audiences. These benefits refer to outcomes of prestige and impact, increase in revenues, as well as user satisfaction and engagement (García Avilés et al., 2019).

The relevance of drivers and obstacles varies depending on the adoption level. The assessment of the innovation itself, the required resources for adoption, and its impact on professional norms are relevant on a low adoption stage. That is, knowledge champions focus on the potential change of new technology regarding processes and norms first. Expected outcomes are more relevant on a higher adoption stage, indicating that the evaluation criteria change to the question of paying off. This what-will-it-change/what-will-we-gain dichotomy should be considered in a model of innovation adoption for news organizations. A comprehensive model of innovation adop-

tion comprises influencing factors on the macro level of the market environment; the meso level of organizational characteristics, professional norms, and characteristics of the innovation; and the micro level of knowledge champions as well as other staff.

The results of the present study are subject to limitations. Findings are based on observations and perceptions of the knowledge champion on the micro level of a company and thus represent an individualist perspective (Slappendel, 1996). Hence, findings may overestimate the relevance of the micro level of individuals and their "innovation speak" (Evans, 2018) compared to the meso level of organizational characteristics. It would be valuable to include the evaluations of editorial staff that is not related to a specific innovation adoption as well as the management side. Despite the small number of interviews in the present study, a satisfying level of theoretical saturation was reached regarding drivers and obstacles of innovation adoption stages. However, knowledge about the negotiation of professional standards during the awareness stage should be extended. Future research could focus on the awareness and sensemaking processes to understand how and why actors develop positive or negative views of a new technology using ethnographical methods including observations of editorial meetings and analyzing internal documents. Further, we identified proficient 360° video adopters in com-

paratively small, regional news outlets in a non-metropolitan area. In media markets with a greater diffusion of a new technology within the news industry, the environmental influence of competitor pressure as well as positive network effects can be expected to become drivers for a positive adoption decision. Finally, this study used a storytelling format innovation (Bleyen et al., 2014; Evans, 2018) as an example for technology innovation. We assume that any new technology for newsrooms that changes the audience experience with news and incorporates technological equipment will be discussed under similar aspects by practitioners in journalism. However, specific drivers and obstacles are expected to be an issue to the specific subject of innovation adoption.

CONCLUSIONS

The present study analyzes drivers and obstacles for the innovation adoption process in news organizations and focuses on the negotiation of professional norms for innovation adoption. The findings are in line with previous research into innovation adoption of companies (Meyer, 2000; Orlikowski, 1996; Rogers, 1995) as well as innovation adoption in newsrooms (Doyle et al., 2016; García Avilés et al., 2019).

The path of innovation adoption regarding 360° videos in news organizations consists of three major steps: the awareness, the experimentation, and the

proficiency stage. The adoption journey begins with a curious innovative agent, who represents a technology-savvy knowledge champion, who regards a new technology as beneficial for the organization and in compliance with professional norms. This knowledge champion serves as a gatekeeper for innovation adoption, that is, the champion can take the role of a soul of fire or devil's advocate, depending on her individual evaluation of an innovation. When there are expected or perceived monetary, company image, or audience benefits after experimenting with a new technology, a news organization will proceed to the proficiency stage in which the new technology is incorporated into standard routines.

This study finds that the negotiation of professional standards enhances or blocks innovations. Thereby, traditional norms, such as the disseminator role and journalistic autonomy (Schudson, 2011) and norms that are developed in the digital age, such as the value of innovation itself and audience utility, are negotiated against each other. Innovations are blocked if compromising traditional professional norms of strategic relevance for a news organization. In contrast, innovations may be adopted if traditional professional norms can be renegotiated with digital-age norms, or if an innovation enhances novel norms of digital journalism.

Innovation and innovative ability are discussed

as professional values by the interviewed knowledge champions, which indicates that the constant-innovation narrative (Russell, 2017) is adopted in journalism. In contrast to Creech and Nadler's (2017) assumption that the focus on innovation marginalizes normative standards, this study finds that innovations are carefully evaluated against professional norms, especially when these norms are regarded as strategically important. Moreover, normative principles relating to digital journalism do not collide with but enhance innovation adoption. However, seeing that traditional norms and role conceptions are extended with novel norms in the digital age, which may be enhanced through innovations, Creech and Nadler's (2017) concern remains valid.

This study contributes to a growing body of research on journalism innovation dedicated to reveal how innovation is achieved. Showing how dependent innovation is on appropriate managerial structures and actors' disposition to seek or foster change, our findings inform theoretical debates about organizational innovation adoption. We conclude that for understanding innovation adoption in newsrooms, traditional as well as contemporary normative journalistic principles that can drive or restrain innovation adoption have to be considered. Journalists do not innovate "all shiny new things" (Küng, 2017, p. 7) at any costs but consider journalism's societal pur-

pose when assessing a new technology. Therefore, models of newsroom innovation adoption need to be extended with the negotiation of normative principles.

Innovation adoption in journalism do not fundamentally differ to other industries, yet we argue that the role of professional norms plays a central role specifically in journalism. This study therefore contributes to a development of a comprehensive newsroom innovation adoption model. To arrive at a such a model, it would be most useful if future research is able to quantitatively estimate the relative importance of normative concerns in the realm of drivers and obstacles for newsroom innovation adoption.

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