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Science Communication in the Humanities. Principles and Practical Examples

Science communication is an important topic in Natural Sciences and is also on the rise in the Humanities. For researchers there are different ways of science communication. It can be done face-to-face or even through new media. This includes the internet, with its various platforms. The internet offers a way for quick knowledge exchange, networking, and science communication. Science communication often seems to be a burden, as concepts and target groups have to be well thought through and this often has to be done beside the actual research work. However, it also has many advantages for researchers in the Humanities. In addition to a brief introduction to science communication and concept development, this article aims to present different platforms and successful examples of science communication from the Humanities.

Keywords: Science communication, Instagram, Blog, New Media, Science Slam, Communication methods, Humanities

1. Introduction

The term *science communication* has been used more and more recently. Science communication has always been an important topic in Natural Sciences and especially during the COVID-19 pandemic, it has become increasingly important to educate people in an understandable way using the right methods of science communication. But the topic is also on the rise in the Humanities. It is becoming more important to also communicate the work in the Humanities outside the usual communication lectures, such as scientific lectures. Beside print journals, documentary series and museum exhibitions there are many more ways to present archaeological research to a wider au-

dience. This article¹ should give a theoretical overview to science communication, provide the steps on how to create a science communication concept and present different ways of science communications (especially on social media) with their successful examples from the Humanities.

2. What is science communication?

According to Burns et al. 2003 'Science communication may be defined as the use of appropriate skills, media, activities, and dialogue to produce one or more of the following personal responses to science.'² These responses are called the vowel analogy. The vowels stand for certain principles of science communication:³

A: Awareness, which includes familiarity with new aspects of science

E: Enjoyment or other affective responses, e.g. the appreciation of science as entertainment or art

I: Interest, as demonstrated by the voluntary involvement with science or its communication

O: Opinions, that form, reshape or confirm science-related attitudes

U: Understanding of science, its content, processes, and social factors.⁴

The aim of science communication is not only to impart knowledge, but also interest and joy. It should create awareness of science and shape attitudes towards it. One of the two main aims of science communication is the public awareness of science. It is shortened as PAS and is about a positive stance on

¹ This article and the author's presentation at Sapiens Ubique Civis IX were prepared after participating in the training course "Wissenschaftskommunikation" on May 09th and 10th, 2022 at the University of Graz, held by Th. Gremsl, (H. Jungwirth) and H. Walter. The course enabled the author to learn the basics of science communication and to provide basic literature.

² The definition according to BURNS et al. is the common definition of science communication, which is still used by most of the subsequent researchers after 20 years.

³ BURNS et al. (2003: 191).

⁴ BURNS et al. (2003: 191).

science.⁵ The other aim is the public understanding of science. It is shortened as PUS and is about the understanding of scientific content based on a solid scientific knowledge. It is also about the understanding of research methods and the whole process.⁶ Especially PUS is important because science concerns most of our lives, so the understanding of scientific content should be also important for all of us.⁷ The further development of PUS is PUR, the public understanding of research.⁸ This concerns not only Natural Sciences, even the Humanities concern many of our lives. For example, archaeology is also responsible for communicating socially relevant scientific content. The interpretation of cultural artifacts and human behavior can cause to communicate the human story behind the scientific data.⁹ Another point is that a lot of public or political decisions are based on it, for example, when it comes to building projects in archaeologically known areas. Research is also aided by public money and this aid should be based on a solid base of general knowledge.¹⁰

For a researcher, science communication sometimes seems to be a burden. It takes a lot of time and most of the time it is not considered as research evaluation or for a research career.¹¹ Sometimes the researchers also have to justify time spent away from research, their institutions, and colleagues.¹² But it gains in importance in the ranking for project applications. And even researchers can benefit from science communication because it is possible to reflect the social significance of their own research, to exchange with other people, and to gain new perspectives. In addition there are more benefits like image cultivation or self-advertisement, resource acquisition, the recruitment of junior staff, and gaining acceptance in general.¹³

⁵ BURNS et al. (2003: 186).

⁶ BURNS et al. (2003: 184).

⁷ DURANT et al. (1989: 11).

⁸ WEITZE-HECKL (2016: 172–174).

⁹ MELVILLE (2014: 6511).

¹⁰ Why PUS is important for the Natural Sciences see also DURANT et al. (1989: 11).

¹¹ WEITZE-HECKL (2016: 142–145).

¹² MELVILLE (2014: 6512).

¹³ PANSEGRAU et al. (2011).

These points can be applied to the Humanities as well. In the case of archaeology, image cultivation is very important for smaller sites or research areas to gain more attention. Gaining more attention can also help to promote a project or an excavation. The public outreach supports research projects and can positively influence the archaeological funding.¹⁴ The recruitment of junior staff is important especially at universities to interest students for the work in Humanities. In comparison to Natural Sciences, law or business administration there are fewer people studying certain fields of study in the Humanities.¹⁵ Sometimes acceptance seems to be a big problem in the Humanities too. One who is not related to the subject doesn't understand why money and resources are funding our research. Sometimes there is a lack of understanding for archaeological research or a specific field of study. Especially concerning archaeology many people only know about the digging, but are not aware of the whole process, which is often related to the fact that it is not included in the school curriculum. In this context it is important to create awareness that archaeology is not only about an excavation and has nothing to do with treasure hunting.¹⁶ Awareness has to be created that archaeological work also contains e.g. the preparation of an excavation, research work, and a lot of interdisciplinary work. Especially in rural areas it might be wise to highlight archaeological work to counter illegal excavations. People must be made aware that archaeological excavations most of the time unearth a stratigraphy or other finds which are valuable for the research but not hundreds of gold coins with a high monetary value. The right way of science communication could raise more awareness in this occasion.

¹⁴ MELVILLE (2014: 6512).

¹⁵ The student statistics of the University of Graz show the following figures for the winter term of 2022: 88 students in Archaeology, 66 students in Ancient History and 41 students in total for Classical Philology, Latin and Greek inscribed for a BA-program. In comparison there are 167 students in Chemistry, 499 students in Biology and 90 students in Business Administration inscribed for a BA-program (excluding teacher trainees). (Studierendenstatistik Universität Graz, available for internal use, accessed on January 19th, 2023).

¹⁶ See also the media coverage about archeological findings, which are often connected with the term "treasure"; to the image of archaeologists in the media: KAESER (2010: 49–61).

3. Creating a science communication concept

There are a few basics for creating a science communication concept that can be applied to all research areas. These steps are mainly used by individuals who want to start with science communication. The first step is raising awareness for oneself. Before working out the concept, one should answer these questions for oneself: for whom, what, why, where, and how.¹⁷

The question for whom means defining the audience. Sometimes the communication of archaeology is explained with a public interest.¹⁸ But it is not possible to do science communication for the public because one has to be aware that there is not the one homogeneous public but many publics. It could be colleagues, laymen like children or other professional groups, politicians or people from the media. The audience must also be aligned with the platform of science communication.¹⁹ It is important to deal with the audiences' previous knowledge, their interests, their educational background, and their perspectives.²⁰ After defining the audience an aim can be set. The aim must be agreed with the selected audience, which should also have benefits from it.²¹ When it comes to the topic and the message attention should be paid to the general topic at first. Second, the content must be sharpened, again matched with the selected audience.²²

In science communication the language is very important. The use of technical terms must be considered and, if possible, no technical terms or abbreviations should be used. There should be as many as necessary and as little as possible, and they should be explained in an understandable way.²³ These are just a few tips to consider when first preparing a concept. How

¹⁷ KÖNNEKER (2012: 10).

¹⁸ KARL (2012: 23).

¹⁹ See also the last paragraph of this section.

²⁰ KÖNNEKER (2012: 4–7); WEITZE–HECKL (2016: 48–51).

²¹ See also KÖNNEKER (2012: 8–9) about the intended effect and communicative attitude.

²² KÖNNEKER (2012: 13; 16–17).

²³ KÖNNEKER (2012: 160).

ever, the use of language is a much more complex issue that cannot be discussed here due to its scope.²⁴

In connection with defining the audience and the target, the style of communication can be also deduced. Science communication can be done by dialogue (lectures at schools or for a community, guided tours), engagement, and participation (practical exercises or public archaeology projects).²⁵ But it can also be done through the media, like TV, websites, podcasts or social media. The communication style has to be matched with the audience and the aim. Children might be reached via lectures at schools where they can learn something in a playful manner. Teenagers and young adults might be reached on social media, and adults might be reached on social media or science-to-public lectures for example. If social media is chosen as science communication-platform, it is important to choose the right channel because different audiences can be reached on different channels.²⁶

4. Social Media as a science communication platform

Nowadays, the internet and digital multimedia have overtaken television as the main medium of communication.²⁷ The use of social media can, both professionally and privately, have advantages and disadvantages. In the simplest case, social media can be used as highly personalized and relevant “table of contents”, where it is possible to keep up to date with current research, popular science, and even with topics such as science policy, funding, publishing, or personal career development. Some social media platforms can also be used as tools for professional networking, either within specific subject fields or across different disciplines, and professions. The value of social media with entirely open networks cannot be underestimated, com-

²⁴ For the use of language in the context of science communication see also LIEDTKE-TUCHEN (2018: 413–422) with further literature.

²⁵ See also MELVILLE (2014: 6511).

²⁶ See also AUXIER-ANDERSON (2021) <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/> (accessed on January 21st, 2023).

²⁷ MELVILLE (2014: 6513).

pared to purely academic-focused sites like *ResearchGate* or *Academia.edu*. These open platforms not only allow the dialogue between researchers, but also offer the possibility for conversation between science communicators and journalists, teachers, students, researchers, and professionals from other disciplines, and other interested non-experts.²⁸

The active participation in social media networks allows researchers to spread research findings quickly and effectively and to raise their own profile, or the profile of their research groups or institution. So the use of social media can also be highly beneficial by offering new perspectives on their own research through.²⁹ New media allows a lot of different possibilities for doing science communication. In this context some of these platforms and their examples of (archaeological) science communication should be presented.³⁰

Blog

Considering a blog as science communication platform has many advantages. Blogs are one of the most popular and widely used forms of academic publishing. The possibility of blogging is used by researchers in many ways. Not only are summaries of their work or articles published on blogs, but news and entire articles are also exchanged.³¹ Through the possibility of commenting, blogs can also serve as a discussion platform.³²

Compared to classical scientific journals, and thus linear texts, blogs have several advantages. One of the advantages is that they have open data, codes, and materials. They use open peer review. Blogs also have no reputation filter, as anyone can express their opinion as long as it does not violate free speech laws. In addition, blogs have better error correction and are open access.³³ Other advantages are that writing a blog article is long-lasting and

²⁸ OSTERRIEDER (2013: 3).

²⁹ OSTERRIEDER (2013: 3).

³⁰ The presentation of the platforms does not follow a specific ranking.

³¹ KÖNNEKER (2012: 180–188).

³² SCHMIDT (2018: 13).

³³ <https://principia-scientific.org/five-reasons-science-blogs-beat-mainstream-journals/> (Lakens 2017, accessed on January 19th, 2023).

it can be found through the search engine *Google*. A blog is a robust platform to build one's own online reputation. But there are also some disadvantages. It takes a lot of time to create a high-quality scientific blog article and it has to be promoted through other social media platforms, like Twitter, Facebook or even Instagram.³⁴ Although the popularisation of science through online platforms has great social benefits and is essential for further development, a scientific blog is currently a low or insufficient element for a research career. A blogpost can be a good way to make research transparent, but creating a blogpost often takes too much time away from writing articles and books, which are essential for a research career.³⁵

Blogs have already been used in the Humanities for quite a long time. There are even blogs on certain topics in addition to newspapers, such as the archaeological blog by the Austrian newspaper *Der Standard*, which is presenting current research topics.³⁶ Another example is the blog from *Stadtarchäologie Wien*³⁷ which is mostly used to present findings and is written for scientific and nonscientific readers.³⁸ On this blog most of the titles are plays on words, which are used to gain attention, such as the article about the finds of a specific excavation at Vienna which contains an unusually high proportion of plate fragments. It has the title *Tischlein deck dich*,³⁹ what is referring to the novel of the magic wishing table. Another one is named *Jingle bells*, which was published shortly before Christmas and deals with bells from the excavation at Frankhplatz, Vienna⁴⁰. The titles already attract attention and encourage the reader to engage with the topics,⁴¹ In

³⁴ WEITZE–HECKL (2016: 192).

³⁵ See also on the pressure to publish: <https://www.faz.net/aktuell/wissen/forschung-politik/junge-wissenschaftler-stehen-unter-starkem-publikationsdruck-15664959.html> (accessed on July 5th, 2023).

³⁶ <https://www.derstandard.at/wissenschaft/wissensblogs/archaeologieblog> (accessed on January 19th, 2023).

³⁷ The blog is a part of the website from *Stadtarchäologie Wien*. The articles are written by Mag. Christine Ranseder and Mag. Ingeborg Gaisbauer.

³⁸ <https://stadtarchaeologie.at> (accessed on January 19th, 2023).

³⁹ <https://stadtarchaeologie.at/tischlein-deck-dich/> (accessed on January 19th, 2023).

⁴⁰ <https://stadtarchaeologie.at/jingle-bells/> (accessed on January 12th, 2023).

⁴¹ Advices for the written and spoken language in science communication see for example: HOLZER et al. (2015: 16–23); WEITZE–HECKL (2016: 55–66;); KÖNNEKER (2012).

the year of 2022 the blog listed more than 56,000 accesses.⁴² The statistics also show that older blog entries are still being accessed years later which demonstrates that it pays to build up a blog constantly over the years. The reading behaviour also shows that there are no preferences for specific topics and that the accesses are evenly distributed over weekdays and months. Peaks can be observed in connection with current events. An example is the excavation at Michaelerplatz in Vienna in the year of 2023, which was also reported on Austrian television and newspapers. At this time the blog recorded over 4,500 hits in a few days, with daily peaks of over 1,200 hits.⁴³ But the authors experience also the already mentioned “disadvantage” of creating a blog: it takes a lot of time creating a blog-article in this quality which is why due to the ever-increasing workload it is no longer possible to publish a weekly blogpost.⁴⁴ The feedback from readers is consistently positive. In 2019 it was also listed as number 2 among archaeological blogs from the newspaper *DerStandard.d*⁴⁵

Podcasts

Podcasts can also be used as a modern format of science communication. They can aim at a group of nonscientific interested people but also at specialists of a certain topic. Podcasts are known to be audio or video contributions that resemble radio or television programs and can be used via the internet. In the meantime, podcasts can also be accessed conveniently via smartphones, tablets or computers without subscriptions. In the scientific field, podcasts are often offered as a supplement to (online) journals or science

⁴² My special thanks go to Mag. Christine Ranseder from Stadtarchäologie Wien. Despite the heavy workload, she took the time to answer all my questions about the blog experience and filtered out data by hand. The following descriptions refer to the information provided by her.

⁴³ Here I would like to mention that there is no special advertisement for the blog. New blog articles are only published through Facebook among other news from *Stadtarchäologie Wien*.

⁴⁴ *Stadtarchäologie Wien* has been able to compensate this with its wide range of offerings and contributions in other sections of the website.

⁴⁵ <https://www.derstandard.at/story/2000110747741/die-besten-anderen-archaeologieblogs> (accessed on July 20th, 2023).

blogs.⁴⁶ Now there are also independent scientific podcasts, or podcasts produced by specific research institutions or museums. The Humanities have discovered podcasts as a medium of science communication for themselves. There are examples of podcasts for all disciplines of the Humanities. Examples include the classical philology podcast entitled *Unklassisch – Antike und Latein im 21. Jahrhundert*, which deals with various topics ranging from Latin grammar and textual criticism to the question of why one should still learn Latin today. The podcast is run by two philologists from Germany, Patrick Kappacher and Julia Wekel.⁴⁷ An archaeological example is the Austrian podcast *Artefakte erzählen*, which slogan is ‘not to be always deadly serious, but always scientific!’. The principle of the podcast is the dialogue between the archaeologist Susanne Lamm and a layperson interested in archaeology, Natascha Ramic. They talk about topics in classical and provincial Roman archaeology and also welcome guests who present their research.⁴⁸ Another noteworthy Austrian podcast is *Im Museum* by Iris Borovčnik and Andreas Fischer. As already mentioned there are specific podcasts by and about museums but this one deals with different museums, mostly from the Viennese region, and presents different objects of each museum.⁴⁹

The production of a scientific podcast should also be oriented towards the requirements of a science communication concept.⁵⁰ However, other points must also be taken into account, such as the necessary technology or publishing strategies.⁵¹ It is also important to post at regular intervals as a relationship is built between the podcaster and the listeners and they want to rely on certain data.⁵²

⁴⁶ BALL (2020: 122).

⁴⁷ <https://www.unklassisch.de/podcast/> (accessed on January 12th, 2023).

⁴⁸ <https://1lpmzl.podcaster.de> (accessed on January 12th, 2023).

⁴⁹ <https://www.immuseum.at> (accessed on January 12th, 2023).

⁵⁰ See chapter “Creating a science communication concept”.

⁵¹ For a detailed analysis see HAMMERSCHMIDT 2020.

⁵² Presentation „Wissenschaft hören: Warum Podcasts ein effektives Medium für die Wissenschaftskommunikation sind“ by F. Freistetter within the framework of the conference „Brennpunkt WissKomm 22“ on September 24th, 2022 at University of Graz.

YouTube

Video platforms like YouTube offer researchers a very good opportunity to present their work in a highly visualized way and with moving images. However, the predominantly scientific use of videos has so far been to present complex scientific issues in a way that is understandable to lay people.⁵³ Videos can now be produced and edited with just a few tools and a smartphone. However, there are no upper limits for the equipment. The channel *History Calling* on YouTube provides history documentaries based on thoroughly research and reading of original evidences. It is produced by a specialist, an historian from Northern Ireland.⁵⁴

The disadvantages of science communication on YouTube are a lack of differentiation between facts and opinions, information overload as a result of overflowing offers and the emergence of polarized echo chambers. Advantages include the promotion of public discourse on scientific topics, easier access to scientific knowledge and the possibilities of collaborative knowledge building through the interactivity of the YouTube platform.⁵⁵

Instagram

The smartphone application Instagram is used to share pictures and videos. Soon also companies discovered the platform as a way to interact with consumers.⁵⁶ And just like that researchers discovered Instagram to promote their new research, for discussions, and for networking. The platform offers many possibilities for science communication with sharing pictures, videos, reels (short videos), and stories (videos or pictures available for 24 hours). Content can be discussed publicly for all users or via private messages. The community can also be actively involved through surveys.

⁵³ BALL (2020: 124).

⁵⁴ <https://www.youtube.com/@HistoryCalling/about> (accessed on January 12th, 2023).

⁵⁵ BUCHER et al (2022: 23).

⁵⁶ MATTERN (2016: 6–10).

Just like blogs, there are either individual researchers, research networks or even museums which post content on their channels. Instagram can be used as a stand-alone science communication platform, but also in addition to other platforms already presented. Almost all science communication formats presented so far also use Instagram, either to promote content from other platforms or to share additional information. As already mentioned science communication can also be used to raise awareness, especially in the Humanities it can be used to raise awareness for cultural heritage. This is for example shown by the Instagram page @englishheritage. English heritage manages, promotes, and cares for over 400 buildings, monuments, and sites in the United Kingdom. Famous examples are Hadrian's Wall, Stonehenge or Dover Castle.⁵⁷ They promote their places through Instagram and provide more information about the sites. Besides creating more awareness for cultural heritage, the outreach via Instagram also leads to more visitors, which has a positive impact on the funding of English Heritage.⁵⁸ Beside Instagram profiles from individual researcher of the Humanities such as @the_archaeologist_tecup, who provides content about her archaeological research on Instagram, as well on a blog and in a podcast, also the Instagram profile @letsdogabout.science⁵⁹ should be mentioned as an example from the author's home university. The molecular biologist is Austria's first professor for science communication.⁶⁰ With his Instagram channel he provides a platform for different research fields including the Humanities. Among other things, he uploads videos up to one minute interviewing different researchers, who introduce their research fields or answer research questions in an understandable way for the community. One example is the interview with Margit Lindner, professor for Ancient History at the University of Graz, about violence in antiquity.⁶¹

⁵⁷ <https://www.english-heritage.org.uk/about-us/our-history/> (accessed on January 12th, 2023).

⁵⁸ See also chapter "What is science communication?"

⁵⁹ <https://www.instagram.com/letsdogabout.science/> (accessed on January 12th, 2023).

⁶⁰ <https://www.diepresse.com/5107851/professur-fuer-sehen-staunen-lachen-ausprobieren> (accessed on January 12th, 2023).

⁶¹ <https://www.instagram.com/p/B5UkoPKnoea/?igshid=YmMyMTA2M2Y=> (accessed on

Flickr

Flickr also counts as a social network. It is an online-platform for pictures and videos,⁶² where it is possible to share and organize them. At first glance, it does not appear to be a platform for science communication, but with the possibility to post comments, discussions can also arise here. Depending on the content uploaded, the platform also offers the possibility of science communication. This is shown, for example, by the Flickr page of *Biodiversity Heritage Library*,⁶³ where more than 15.000 scientific books dated back until the 15th century are collected and provide scientific content for interested people as well for researchers.⁶⁴

X

The first use of X, formerly known as Twitter, was as a status-messaging service. It is still used for this but nowadays it is adopted widespread by people from all walks of life. It has revolutionized the way people communicate. The platform allows users to share, discuss, and debate ideas and information.⁶⁵ In fact X was used as one of the first social media platforms for science communication. It is possible to use it for publishing new research, to connect with other researchers or as an attendant medium for conferences for example.⁶⁶ The advantages of X are that it takes less time to write a Tweet and it's possible to connect with other researchers very fast. But it is short-lived, not possible to find through search engines, and it takes a lot of time to build a community.⁶⁷ Different examples for archaeological science communication on X can be found. There are museums like the Museum of London

January 25th, 2023).

⁶² BALL (2022: 123).

⁶³ <https://www.flickr.com/photos/biodivlibrary/sets/> (accessed on January 12th, 2023).

⁶⁴ BALL (2022: 123).

⁶⁵ MARCINIAK (2019: 101).

⁶⁶ BALL (2022: 123).

⁶⁷ WEITZE-HECKL (2016: 192).

Archaeology (MOLA),⁶⁸ private persons like the archaeologist Dr. Sophia Adams⁶⁹ or even magazines like the Archaeology Magazine.⁷⁰ Mostly X is used here as an additional medium to advertise projects and events, present findings and so to refer to articles.⁷¹

5. Other formats: Science Slam and Pop-Up-Store

Science Slam

To show the diversity of science communication formats, two other formats should also be mentioned. Science slams are lecture competitions in which researchers present their own research. These are short lectures of limited duration. The lectures should be presented in a generally understandable and entertaining way. The audience evaluates the presentations and chooses a winner. The idea of science slams is based on the poetry slam, a lecture competition with literary texts.⁷² The events usually take place outside academic institutions, for example in clubs or cultural and youth centers, to set themselves apart from traditional academic evening lectures and public lecture series.⁷³ An important point is to find the connection to the audience and to impart basic knowledge, a contemporary topic or rather the connection to it. The inner structure is characterized by some linguistic and medial features. For the most part, an attempt is made to avoid technical language and to use everyday language. There is also a slight tendency to use slang and anglicisms.⁷⁴ Even researchers of the Humanities have discovered the format for themselves like shown by the winners of the Science Slam Vienna 2020, Karina Grömer and Andrea Krapf. Their topic was *Distancing in Bronze Age*. Watching the video, one will realize that all the requirements of a science slam are met: A scientific topic is dealt with in an understandable way,

⁶⁸ <https://twitter.com/MOLArchaeology> (accessed on July 7th, 2023).

⁶⁹ <https://twitter.com/TactileArchaeol> (accessed on July 7th, 2023).

⁷⁰ <https://twitter.com/archaeologymag> (accessed on July 7th, 2023).

⁷¹ See also BALL (2022: 123).

⁷² NIEMANN et al. (2020: 2).

⁷³ HILL (2015: 20).

⁷⁴ HILL (2019: 219).

furthermore there are also humorous features, personal insights, and it is also connected to a current topic (pandemic) already in the title.⁷⁵

Pop-Up-Store

In the year of 2022, the University of Graz realized a pop-up-store as a science communication format. The term pop-up-store⁷⁶ usually refers to a new type of retail shop format that is limited in time and to a single location.⁷⁷ So the format was transferred to a scientific one and held outside the academic institution in the city center of Graz, where it was also possible to reach out to a wider audience. It was open for the public and easy accessible. The format was open to all research fields and provided different activities like lectures, discussions, and workshops. The Humanities have been represented from all of their different research fields. The Institute of Antiquity, for example, was presented by lectures about archaeology in Cyprus,⁷⁸ fashion in antiquity,⁷⁹ animals in archaeology,⁸⁰ writing in cuneiform,⁸¹ or an interdisciplinary talk about war and peace.⁸²

6. Conclusion

Science communication is getting more important in all research fields. New media offers more and more opportunities to present one's own research in different ways. So social media can, on the one hand, be a knowledge

⁷⁵ <https://www.youtube.com/watch?v=xhRZ1ekGsn8&t=339s> (accessed on January 2nd, 2023)

⁷⁶ For a detailed analysis of pop-up stores: KASTNER 2015.

⁷⁷ NIEHM ET AL. (2007: 2).

⁷⁸ <https://popupstore.uni-graz.at/de/veranstaltungen/detail/article/treffpunkt-zypernacc-1/> (accessed on January 2nd, 2023).

⁷⁹ <https://popupstore.uni-graz.at/de/veranstaltungen/detail/article/der-letzte-schrei-modevor-2000-jahren-1/> (accessed on January 2nd, 2023).

⁸⁰ <https://popupstore.uni-graz.at/de/veranstaltungen/detail/article/tiere-in-der-archaeologie-1/> (accessed on January 2nd, 2023).

⁸¹ <https://popupstore.uni-graz.at/de/veranstaltungen/detail/article/schreiben-in-keil-schrift-1/> (accessed on January 2nd, 2023).

⁸² <https://popupstore.uni-graz.at/de/veranstaltungen/detail/article/latest-lecture-krieg-und-frieden-2-1/> (accessed on January 2nd, 2023).

base, while on the other hand it is also a good platform for interaction. A discussion can arise within minutes.⁸³ Depending on the platform, it differs how discussions can be held. On platforms such as YouTube, Instagram and sometimes on blogs, it is possible to have a discussion directly in the comment section. On the other hand, listeners of podcasts most of the time have to switch from the original podcast platform to other platforms. These could be forums or other social media channels where the podcast is presented.

But one must be aware to face potential criticism and there is also the risk of fake news which can spread sometimes even faster alongside a real science communication. There are many things to consider when social media is chosen as a platform for science communication. But as long as everything is well planned, the advantages can outweigh the disadvantages and support one's own research.⁸⁴

In any case all of these shown cases require a flexible approach which emphasizes the relevance of research in the Humanities.⁸⁵ Many special topics will not concern the public. But a way around can be built, excluding technical terms, to provide a basic knowledge about antiquity. Putting up on these topics the work in Humanities can be explained to create awareness of our researches. The whole science communication can be built on this quintessence of creating more awareness and this can be done, as shown, through different ways.

So to conclude I want to underline that science communication is getting more important in the Humanities. Most of the time it is an unpaid side-work but still will help with further research funding, creating awareness for working in Humanities, and establishing new contacts. A science communication concept has to be well thought through and always be matched with the audience. New media makes it possible for new researches to communicate quickly and easily with a wider audience. There are far more advantages than disadvantages, which is why you should consider including

⁸³ SCHERZLER (2012: 237).

⁸⁴ See also chapter "What is science communication?" and the advantages of science communication.

⁸⁵ MELVILLE (2014: 6512).

science communication methods in your work and also communicate your work outside of the academic setting.

Bibliography

- BALL 2020 R. BALL: *Wissenschaftskommunikation im Wandel. Von Gutenberg bis Open Science*. Wiesbaden 2020. DOI: <https://doi.org/10.1007/978-3-658-31541-2>
- BUCHER et al. 2022 H. J. BUCHER – B. BOY – K. CHRIST: *Audiovisuelle Wissenschaftskommunikation auf YouTube. Eine Rezeptionsstudie zur Vermittlungsleistung von Wissenschaftsvideos*. Wiesbaden 2022. DOI: <https://doi.org/10.1007/978-3-658-35618-7>
- BURNS et al. 2003 T. W. BURNS – D. J. O'CONNOR – S. M. STOCKLMAYER: *Science Communication. A Contemporary Definition*. *Public Understanding of Science* 12 (2003) 183–202. DOI: <https://doi.org/10.1177/09636625030122004>
- DURANT et al. 1989 J. R. DURANT – G. A. EVANS – G. P. THOMAS: *The public understanding of science*. *Nature* 340 (1989) 11–14. DOI: <https://doi.org/10.1038/340011a0>
- HAMMERSCHMIDT 2020 D. HAMMERSCHMIDT, *Das Podcast-Buch. Strategie, Technik, Tipps – mit Fokus auf Corporate-Podcasts von Unternehmen & Organisationen*. Freiburg 2020.
- HILL 2015 M. Hill: *Science Slam und die Geschichte der Kommunikation von wissenschaftlichem Wissen an außeruniversitäre Öffentlichkeiten*. In: J. Engelschalt – A. Maibaum (ed.): *Auf der Suche nach den Tatsachen: Proceedings der 1. Tagung des Nachwuchsnetzwerks „INSIST“*, 22.-23. Oktober 2014, Berlin. Berlin 2015, 127–141.
- HILL 2019 M. HILL: *Slamming Science. The New Art Of Old Public Science Communication*. Berlin 2019. DOI: <https://doi.org/10.1007/s11616-022-00771-7>
- HOLZER et al. 2015 E. HOLZER – O. PINK – A. SCHWEIGER – A. SENARCLENS DE GRANCY – N. SWOBODA: *McScience. Das Rezeptbuch für Wissenschaftskommunikation*. Graz 2015.
- KAESER 2010 M. A. KAESER: *ArchäologInnen und Archäologie in den Medien: Ein störendes Bild?* In: H. J. Gehrke – M. Sénécheau (ed.): *Geschichte, Archäologie, Öffentlichkeit: Für einen neuen Dialog zwischen Wissenschaft und Medien. Standpunkte aus Forschung und Praxis, Historische Lebenswelten in populären Wissenskulturen* 4. Bielefeld 2010, 49–61.
- KARL 2012 R. KARL: *The public? Which public?* In: N. Schücker (ed.): *Integrating Archaeology Science - Wish - Reality. International Conference on the Social Role, Possibilities and Perspectives of Classical Studies. Papers held in Frankfurt am Main on 12-14 June 2012*. Frankfurt am Main 2012, 23–26.
- KASTNER 2015 O. L. KASTNER: *Erfolgsfaktoren von Pop-up Stores. Fallstudiengestützte Evaluation am Beispiel der Bekleidungsindustrie*. Wiesbaden 2015. DOI: <https://doi.org/10.1007/978-3-658-08945-0>

- KÖNNEKER 2012 C. KÖNNEKER: *Wissenschaft kommunizieren. Ein Handbuch mit vielen praktischen Beispielen*. Weinheim 2012.
- LIEDTKE – TUCHEN 2018 F. LIEDTKE – A. TUCHEN: *Handbuch Pragmatik*. Stuttgart 2018. DOI: <https://doi.org/10.1007/978-3-476-04624-6>
- MARCINIAK 2019 K. MARCINIAK: *Twitter*. Minneapolis 2019.
- MATTERN 2016 J. Mattern, *Instagram*. Minneapolis 2016.
- MELVILLE 2014 A. Melville, *Science Communication in Archaeology*. In: C. Smith (ed.): *Encyclopedia of Global Archaeology*. New York 2014, 6511–6515. DOI: <https://doi.org/10.1007/978-1-4419-0465-2>
- NIEHM et al. 2007 L. S. NIEHM – A. M. FIORE – M. JEONG – H. J. KIM: *Pop-up Retail's Acceptability as an Innovative Business Strategy and Enhancer of the Consumer Shopping Experience*. *Journal of Shopping Center Research* 13 (2007) 1–30.
- NIEMANN et al. 2020 P. NIEMANN – L. BITTNER – C. HAUSER – P. SCHRÖGEL: *Science-Slam. Multidisziplinäre Perspektiven auf eine populäre Form der Wissenschaftskommunikation*. Wiesbaden 2020. DOI: <https://doi.org/10.1007/978-3-658-28861-7>
- OSTERRIEDER 2013 A. OSTERRIEDER: *The value and use of social media as communication tool in the plant sciences*. *Plant Methods* 9 (2013) 1–6. DOI: <https://doi.org/10.1186/1746-4811-9-26>
- PANSEGRAU et al. 2011 P. PANSEGRAU – N. TAUBERT, P. WEINGART (unter Mitarbeit von S. Förster): *Wissenschaftskommunikation in Deutschland. Ergebnisse einer Onlinebefragung*. Berlin 2011.
- SCHERZLER 2012 D. SCHERZLER: *On humility, power shift and cultural change: Archaeology on Web 2.0 sites*. In: N. Schücker (ed.): *Integrating Archaeology Science - Wish - Reality. International Conference on the Social Role, Possibilities and Perspectives of Classical Studies. Papers held in Frankfurt am Main on 12-14 June 2012*. Frankfurt am Main 2012, 237–240.
- SCHMIDT 2018 J. H. SCHMIDT: *Social Media*. Wiesbaden 2018. DOI: <https://doi.org/10.1007/978-3-658-19455-0>
- WEITZE – HECKL 2016 M. D. WEITZE – W. M. HECKL: *Wissenschaftskommunikation. Schlüsselideen, Akteure, Fallbeispiele*. Heidelberg 2016. DOI: <https://doi.org/10.1007/978-3-662-47843-1>