Drawn to Archaeology: Using Comics for Outreach, Education and Academics in Archaeology

Braam, Gijs

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Cover figure: Think outside the box. (Cartoon by G. Braam, 2024)

Drawn to archaeology: Using Comics for Outreach, Education and Academics in Archaeology

Gijs Braam, s1223208.

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A. Politopoulos Ph.D.

Leiden University, Faculty of Archaeology

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1. Introduction and research questions

Archaeology is, in many ways, a visual science (Swogger, 2012; Morgan, 2018; Swogger, 2015). Archaeology focuses mostly on tangible traces of the past - such as materials, objects, buildings, and sites - and studies them through descriptions, pictures, drawings, and other forms of visualization. Loubser (2003, p. ix) argues that "...pictures can impart an idea more concisely and effectively, especially in a visual discipline like archaeology".

Kamash et al. (2022, p. 5) argue that it is "even a perverse thought not to note archaeology is a highly visual discipline". They underline this idea by reasoning that while archaeology focuses on the study of material culture, landscapes, and archaeological sites, the documentation and study of these are often done through visual media like drawings or photographs. As such, Kamash et al. argue, it is surprising that archaeology has not made use of other visual media, perhaps even comics (Kamash et al., 2022, p. 5).

When considering archaeology as a visual discipline, a more visual approach to other aspects of our field is also warranted. Archaeological material will have, for example, changes in decoration or style, all understood by looking at the material. Note even, the first form of communication in an indirect or non-somatic way was by using drawings, illustrations, and other visual representations of the topic at hand. This is shown in early scripts or pictographs but also in its perhaps oldest form, paleolithic rock art. A telling example of the aforementioned is the Chauvet Cave (Chauvet et al., 1996).

Because of the nature of the scientific process today, scientists use literature, written sources, and usually a specific technical language to convey their research and thinking. But what if the topic of study is more suited to a visual approach? What if the recipient of information is better suited to visual stimulation? These questions form the basis for this thesis. If the subject matter originates in visual material, and a visual approach to communicating this matter exists, why are we not utilizing the combination? This thesis will try to show the benefits of using a different, more visual approach to communicating science and for scientific education. It will consider some of the different results that can be achieved with this approach and show examples of how some academic archaeologists have already turned their textual material into visual literature.

In a recent paper by Politopoulos et al. (2023) 'play' is presented as an important aspect of learning, yet it is shown this is not taken seriously in academic regions. In personal correspondence with Philip Yenawine (the creator of Visual Thinking Strategies, which will be discussed in chapter 3) he expressed similar thoughts about comics and graphic novels, agreeing they indeed are a valid medium for information transmission, suffering from an image of being a medium for children, not suitable for academic purposes (see also Yenawine, 2013). Even though multiple examples can be given that use such mediums and do it well (see chapter 4 of this thesis), the general perception of comics remains one of inferiority compared to more traditional forms of scientific output. In this thesis, an argument for the use of comics in academia, and specifically a science with high visual properties like archaeology, will be made.

In this thesis an outline for the use of comics in archaeology will be given. The main research question that will be answered is :

Can archaeology profitably engage with comics and sequential art:
- *In formal education settings?*
- *In informal education settings and outreach?*
- *For academic purposes?*

Fields such as archaeogaming have already illustrated the potential to broaden archaeological research and outreach beyond traditional academic outputs (Politopoulos & Mol, 2023). This thesis will follow a comparable approach to demonstrate that comics have a similar potential. Comics reach a different group of the potential interested public, as well as bring variation to the usual outreach, enhancing the potential of the material by applying it in differing ways. It adds a method of visualization to the story archaeologists want to tell, be it the entire story of a site, or an update on ongoing dig sites, for example. Not every story will be read by every reader, but the more options we give our target audience, the higher the chance it will be picked up.

There has been literature on the use of archaeology as a subject in film, gaming, or other forms of 'modern' media, about how archaeology is a vessel for storytelling, and can be used as a means to portray specific narratives (see for some examples Morgan, 2014; Fennely, 2023; Boom et al., 2020). Rather, what if we do not use science to tell a 'cool story' (for example, how Indiana Jones could have been a professor of any other academic field, and still be the one to save an important treasure from his enemy. Or, alternatively, how in Jurassic Park genetic engineering was used as a plot hook to tell an adventure story about

dinosaurs), and instead use a 'fun medium' to talk about facts and contextual science? This question forms the crux of this thesis.

2. Theoretical framework

This chapter further explains how the thesis is structured and how the framework is derived, what groundwork is needed to be able to combine my arguments, and based on what scientific precedents the concluding arguments were built.

In this thesis certain terms will be used that contain other iterations or combine different definitions, for the ease of writing and reading. One of those terms requiring definition is what is meant by sequential art. The distinction between graphic novels, cartoons, comic books, and other drawn media usually denotes a means to the same end, and will therefore be called 'comics' in this essay. Occasionally, a distinction might prove useful, for example the use of cartoons might be more relevant in one study whilst the use of graphic novels is more applicable in another. In those cases the explanation will need further details and the appropriate terms will be used there. In general those different iterations of the same medium function towards a similar goal, and will be named as one.

Comics do exceptionally well at combining the historical and archaeological source types because there is the possibility of showing what is being written about in a direct and inclusive manner, including for example images of the subject matter, but also a direct portrayal of either the actions needed to create the material, or an explanation in a less stagnant form. A couple of frames can be used to easily illustrate different alternate versions of an argument, or different outcomes of for example archeological methodology and approach. What can become lengthy, descriptive texts thus transform to easily accessible and engaging visuals. If the subject matter is of a more literate kind, the drawn media can give a visual interpretation or additive information regarding details in the source. This can create a combined source that is more complete in its information transmission, whilst also creating opportunities to engage new audiences that would otherwise perhaps be uninterested (Yenawine, 2013, 2019).

Examples from other, scientific or practical, fields will provide precedent for the use of comics in academia, public outreach, and education. With literature proving the legitimacy for such use, three distinct uses for the medium have been chosen, and will argue either why archaeology as a science should use the medium in a similar way, or why our field should adapt the medium into the current tactics for improved results. Each of the categories described in the following chapter will contain a practical use for comics in archaeology. Literature will support the resulting practical use, showing that using comics can reach the proposed use in other fields of science or from experience in its respective, practical, field.

Also included with the category explanations will be an example of the use of comics to reach the result given.

The use of comics in educational settings will be particularly important in terms of inclusivity. Students with functionality disorders and/or learning difficulties benefit from alternative ways of education (Smith, 2006, p. 6). Being a student with a functionality disorder myself, I have experienced trying to identify alternative ways to help improve my academic results. The harsh reality, however, is that currently the academic educational system does not have effective structural support for students that face such challenges. This is despite the fact that many students would welcome alternative educational methods. This led me to explore comics, graphic novels and cartoons, as such mediums have always been something I used successfully to engage with learning material. I tried to find ways to utilize this medium for academic purposes, during an internship in Baarlo in the Netherlands. There my role was focused on public outreach instead of actual archaeological fieldwork and I realized there might be more ways to utilize the medium for archaeology than just in academic literature. This came to my awareness when I tried to find alternative ways to engage the public, seeing that the more 'traditional' methods of newsletters and field tours did not attract as much attention. As I was already focusing on comics, I found an example of exactly the type of alternative methods I was looking for. A blog by an archeologist named John Swogger, who is also a graphic artist and makes comics about archeology, showed me that the medium has great potential for the academic field of archeology (Swogger, 2012).

3. Effective learning with visual tools

If we want to discuss the use of comics as an outreach tool, an asset to education , and/or an alternative form of academic output, first we need to establish the medium is well suited for the transferral of information. To this end, I will present several arguments in favor of the use of comics in science education. Firstly, this chapter will discuss how comics have been a part of education for a long time, and that precedent gives no reason to ignore the medium in present times. I will show a few examples of how it has been used, and why they sustain the notion that it remains worthwhile to keep using the medium. To further support this, examples from other fields of academic research will be given. Secondly, this chapter will show that from other fields of science, such as social studies, psychology, and languages, we know how the use of art, style, and even simply color, can help improve education, motivation, and a student's academic development. Combined, these fields make a reasonable argument that the use of comics is valid, not only as an alternative but also as addition or even improvement for certain means. Thirdly, this chapter will explore that there may be an additional benefit to broadening the educational options, in the sense of enhancing student diversity and inclusivity. This is an important notice that can not be overlooked in present times.

Tilley (2017, p. 3) shows that comics have been a part of education since the early 20th century, showing that the medium has always been seen as a valid option for use in education. This however does not prove that it is also a good teaching method, or even a valid alternative. However, as shown by Finson and Pederson (2011, p. 80), this quote exemplifies that the sustainability of information, its understanding and remembrance all benefit from the use of visual material.

> *"From examples in mathematics, English, social studies, and science, the message is clearly emerging that images assist student learning by providing clearer meanings for concepts they must learn. If we strive to make science understandable for all students it is key that we include visual data as a central component of science teaching and learning. For anyone interested in teaching all levels of science concepts (simple to complex) visual images should be a focus"* (Finson & Pederson, 2011, p. 80).

In some cases, like in statistical or financial reports, that material is a visual representation of data, with the use of graphs or maps. Visual material can however also be a small cartoon at the start of a class, as shown by Kennepohl and Roesky (2008) and Cheesman (2006, p. 48). Here, it is used to attract the attention of students, and make the effective learning time

of each class longer or the class time more effectively used. It is a simple example of how visual material can enhance education and facilitate a more effective and fun classroom.

When the cartoon displayed is directly relevant to the subject matter of a given class (or article), it can not only provide a good way to keep students engaged, but also a stepping stone into the subject, as figure 1 shows. Making students think about a class before it starts can improve engagement throughout the rest of the class, and cartoons can create an approachable start (Hosler & Boomer, 2011).

Figure 1. 'The Dating Game' chapter image. An example of how J. Loubser uses a cartoon to introduce a new chapter in Archaeology the comic. (Loubser, 2003, p. 71).

Seelow (2019) showed that using comics and graphic novels is beneficial in an educational setting. In his work he argued that the use of comics for a multitude of educational purposes, all of which show benefits for the use of the medium. He used a number of examples to illustrate a wide range of utilities. First showing that learning through comics continues outside of the classroom, where children who entertain themselves with comics are still

learning valuable lessons even though they might not even realize (Seelow, 2019, p. 6), (for an example, see figure 2) but also how to use "comics to show how a professor can pair the canon with the popular texts of comics." (Seelow, 2019, p. 8).

Figure 2. Internet warning comic. A page from a special edition Suske & Wiske, created to educate children on the dangers of the internet. (Vandersteen, 2008, p. 6).

Further examples go towards providing educational material for as diverse a group of students as possible (Gregoire, 2019, p. 38) and how comics can be used as a tool for contextual information transferral. The study also outlines in multiple essays how academic institutions around the world have already created programs and tools to study comics, or study with comics as tools. All this shows that the medium is suitable for academic use, and gives examples of methods already in use.

Seeing as sequential art can be an effective tool in enhancing educational potential, for not only the broad public but also for academic students, using it as an alternative method to

diversify the tools we offer our students enhances their versatility in understanding archaeological context, it broadens their options to understand material in a way they find suiting their academic style best. For students with a learning disability it could be beneficial to use alternative materials, either as a full alternative or as an added source, to help either speed up learning, or understanding literary sources. Swoggers' example (2015, p. 4) of how an article can be equally informative with a differing style shows that this does not diminish the quality of the material, it can even provide the same information in fewer pages. With enough guidelines on how an article should be drawn out, a standard could easily be created to ensure this quality across different authors and artists. This can then provide a solid base for students that require a differing approach, granting a more equal opportunity for various groups of students. As an example, Zentall and Kruczek (1988) show that using color, among other stimulants, can be beneficial in educating students with ADHD. Graphic literature that includes a lot of color and visually stimulating imagery, or comics, seems a logical choice to employ in educational materials. For a student with ADHD reading a full, dense article on scientific methods can be quite the challenge, and being content with reading two pages an hour is not at all strange to me. Using literature that is visually adapted not only conveys the same information as its textual counterpart, but it's also more digestible for visual learners.

Visual material can also be used to boost other skills, as shown by Philip Yenawine's (2013) 'Visual thinking strategies', or VTS. VTS is an education method where students' reading abilities have grown by discussing artworks, enhancing not only their analytical and observational skills. This in turn improves further education as those skills are applicable to other visual material as well as literary sources. Yenawine's method, commonly referred to as VTS, is based on observation and discussion, where context is less important than the discussion that is started from the observations made. VTS works mainly by having multiple perspectives discussed by a group of students, and the method is a tool for developing the skills needed to discuss context properly, analyze it and use critical thinking to decide what the best solution or conclusion may be. Seeing as archaeology makes use of these techniques in the field as well, when interpreting, for example, finds and soil states, the technique itself seems a good fit already. In personal correspondence with Philip Yenawine the idea of using contextual visual media as an added layer of learning was discussed, where he stated again that the skills developed were the main reason to use the technique, but that learning contextual information could be an additional benefit. If students need to learn to discuss contexts, as is the case in archaeology, then showing them appropriate contexts in a visually ideal way can help them learn both the intricacies of the context as well as the approach needed to study it. By using comic style posters, or having students discuss

a series of panels, the exact context we need to teach can be shown, perfecting the combination of learning a skill with understanding relevant visual material.

Visual literacy is an important skill in today's society, seeing as our information intake is predominantly visual. Tertiary education is lacking in this regard, and graphic literature may provide a good hybrid toward other visual literacies, create better understanding for students, and act as a bridge between traditional textual academic sources and a more visually inclined generation of students (Kędra & Žakevičiūtė, 2019).

Visual literacy skills, as shown in this special issue, have an empowering effect, creativity stimulation and meaning-making enhancing capabilities, while they also cultivate individual uniqueness through reflection and personal experiences and emphasize active construction of knowledge. Whereas art-based teaching techniques can help us understand how students comprehend complex social phenomena, as pointed out by Gadelshina et al. (2019), or current socio-political issues, as illustrated by Abas (2023), they can also assist in the tailoring of educational programs and classroom material. .

All these examples show that visual materials help in reading comprehension, enhancing students' understanding of the subject matter, and developing skills useful in academia like observation, discussion and reasoning. Visual material draws students in, broadens the skill set of young scholars. This means a visual science like archaeology should have extra focus on providing more material that is also visual in nature, utilizing the benefits that are in general already a welcome addition, but with corresponding source material can be a culmination that ensures even better quality education can be reached.

Combining this to the notion that diversifying the student material catalog by including visual media, and thus enhancing the width of the student body by enabling more students from more diverse backgrounds to engage with our education, is also something not to be overlooked. Diversion is an important factor in current times, and making sure our faculty, or our field of academia, is accessible to all, on itself should be worth the research to make it possible. Being accessible to all types of students not only enlarges and enriches our educational environment, it also grows the potential to improve our research and education quality. It is a path to growth that is wide open, and not utilized to anywhere near its potential yet.

4. Using visual tools for archaeology

Seeing as visual learning is effective, as pointed out in the previous chapter, a translation of sorts of archaeological material to visual means should be a possibility as well. This would enrich the archaeological intellectual base, and give students and other interested folk extra means to study. Good examples of how this can be put to use are already out in the open, but they are sparse and not widely known. Neither is there a consolidated approach, which would make further expansion in this medium easier for future use. I have categorized the different uses of this medium into three groups. Of each an example will be shown, to show how and why its use might benefit our science as a whole.

The three categories are as follows:

- outreach publications about excavations, promotional pieces about exquisite finds, things to interest the general public and to draw people to museums and lectures. If we are talking about visual materials, why do we take the 'seeing or looking' out of the material? We are basically telling people to come and see, but we don't really show anything to convince the public to do so. If the first encounter with archaeology is visual in nature, people will see from the beginning that archaeology can be interesting to look at, instead of possibly finding out in a museum. Especially when we are making a summary of finds in an area, or when we want to show the local community what has been done in their town, a simple list or community center note doesn't draw much attention. A visually pleasing version of the same information might provide a bigger outreach, and is also a possible utility for social media.

- introductory books about archaeology, meant to give in depth information about more general subjects, to educate and enlighten interested readers about our field of work, explaining techniques and methods for example. This would help teach about archaeology to interested members of the public. These publications have as a goal to inform and educate, to be the narrative works about for example archaeological excavation results, and to do so as completely as possible. They are not meant however as grounds for debate, research or other academic purposes. The publications in this category can still be entertaining, but entertainment is no longer one of their main properties.

- archaeological publications, drawn out for other archaeologists and students. This gives students with learning disabilities an extra approach to the material, and may provide alternative methods of publication for the more visually inclined subjects. This last category is solely meant for academic use. Research publications, theoretical debates about visual materials and the like. These publications are not meant to entertain, but to inform as concisely as possible, but also as completely as possible. Using the medium of comics to

improve publication by adding more visual vectors, instead of using the medium as a vessel for education.

For each of these categories, I will provide an example of how comics can be used to reach the goals these categories describe. This will further clarify the target purpose of the category, show what kind of comics may work to reach this purpose, and in general show an example towards the goal of such publications.

Barletta and Lo Manto (2022) very specifically show (figure 3) that archaeology can be very suitable for the comic medium. They show that the medium has grown from children's entertainment to 'the rank of information media' and as such is well suited as a method 'to explain methodology and the fieldwork'. They not only argue this point, but prove it by making it in comic form.

Figure 3. Showcase panel. How Barletta and Lo Manto's exemplary comic portrays a general image of Archaeology, (Barletta & Lo Manto, 2022, p.14).

They argue that by using comics, the description of material can be left out, instead showing visually the subject matter, leaving 'the script focused only on the interpretation'. I would like to argue that by doing so, not only does it help interpretation based on visual sources, it also 'cleans' a text of a lot of descriptive clutter, giving the reader more room for their own interpretation as well. This interpretation is also present in reading a text, and an image is also constructed by somebody else than the reader, so is also an interpretation previous to the reading, but it offers the reader additional, or differing, methods of interpretation and a change of perspective that can broaden the range of interpretation itself.

There is also a subcategory within this that deals with comics for children, entertainment as their main driving force, about archaeology. Comics like *Asterix* but also 'Van nul tot nu' are in this scope. They are comics meant to entertain children, and lightly educate in the meantime (see figures 4 and 5 for examples).

Figure 4. History lesson or joke? An example of how Asterix implements simple facts in an engaging way (Goscinny & Uderzo, 1965, p. 5).

I would put the two types of publication in the same category, because their goal is similar. They provide an entertaining visualization of the past, meant to educate as almost a side-effect. They are useful to grow interest, inform the basics and encourage further research by the reader (see figure 5). They are not meant to give factually perfect information, nor to completely inform.
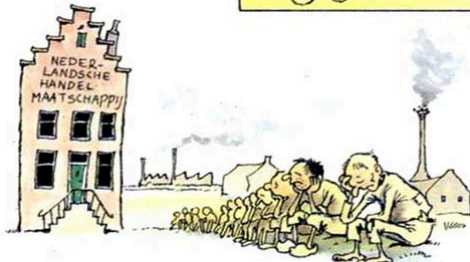
Figure 5. 'Van nul tot nu'. The comic discerns historical lessons, jokes and contemporary lessons by its style choices (Roep, 1985, p. 10).

Regarding outreach, there are multiple versions of publications that might work. There are single page, or 'limited-panel' publications, that provide basic information of ongoing works on archaeological work in local areas, as John Swogger explains (Swogger, 2015). This comes down to a drawn version of a newsletter or info page in local news. Swogger explains in this article how there are several purposes to be chosen from, depending on the goal of your publication. The distinction is that all his categories are comics about archaeology, but in different depths. He distinguishes between the subject, the explanation of process as in figures 6 and 7, and academic publication in comic form (Swogger, 2012), which will be discussed later in this thesis.

Figure 6. Example of how archaeology can be explained to the public (Swogger, 2012).

Figure 7. An explanation of archaeological interpretation process (Swogger, 2015).

I believe the distinction should be made a step further, more pointed towards the recipient, the reader of the product. Later in this thesis we will discuss how a publication about an archaeological process can be made academical, and be useful for students who need to learn about that process. For outreach purposes, the opposite is true: An archaeological publication can be made accessible for the broader public, (see for example figure 8) whilst still maintaining its academic values.
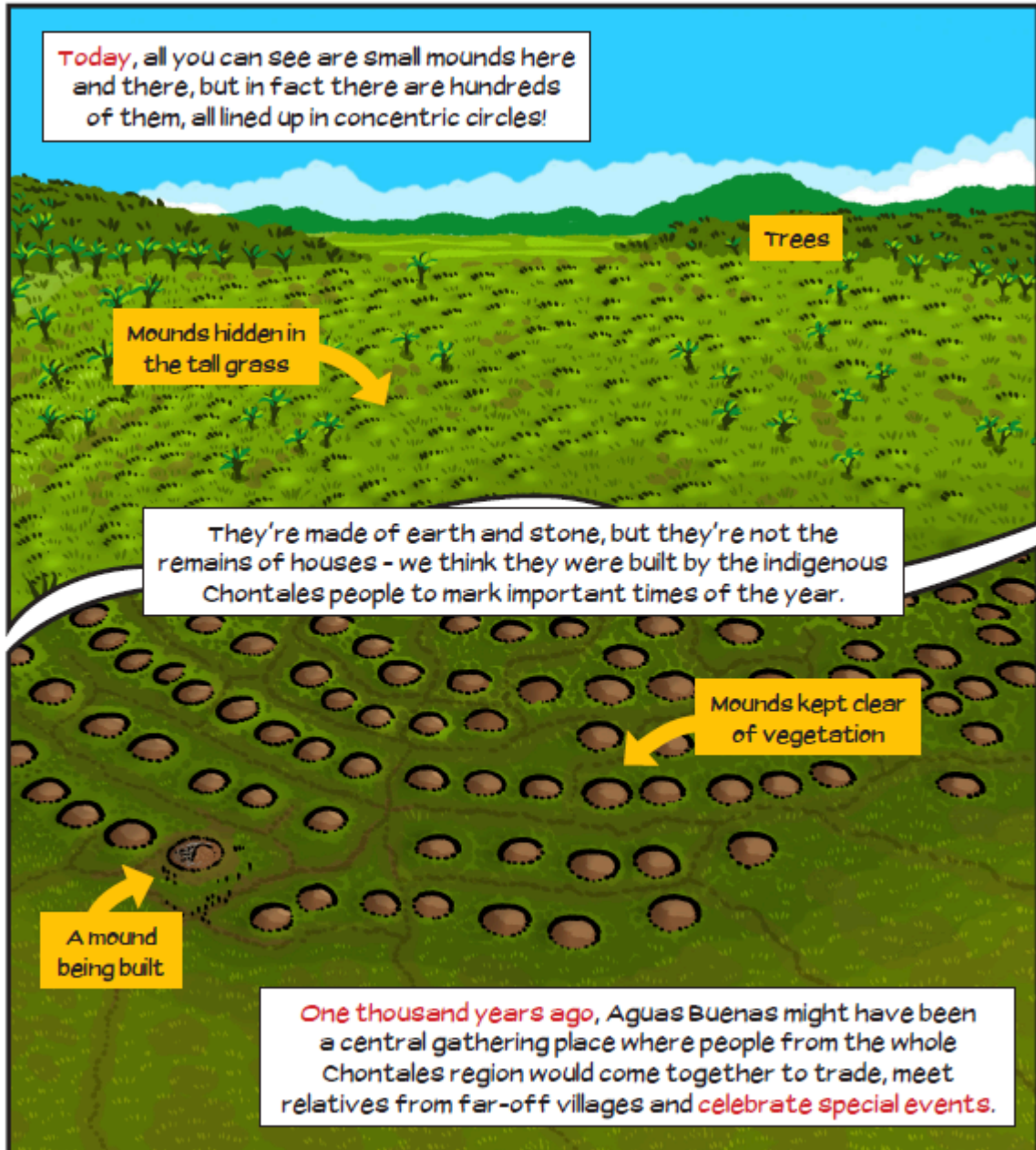
Figure 8. Explanation of how landmarks in today's environment were created in ancient times (Geurds & Swogger, 2019, p. 8).
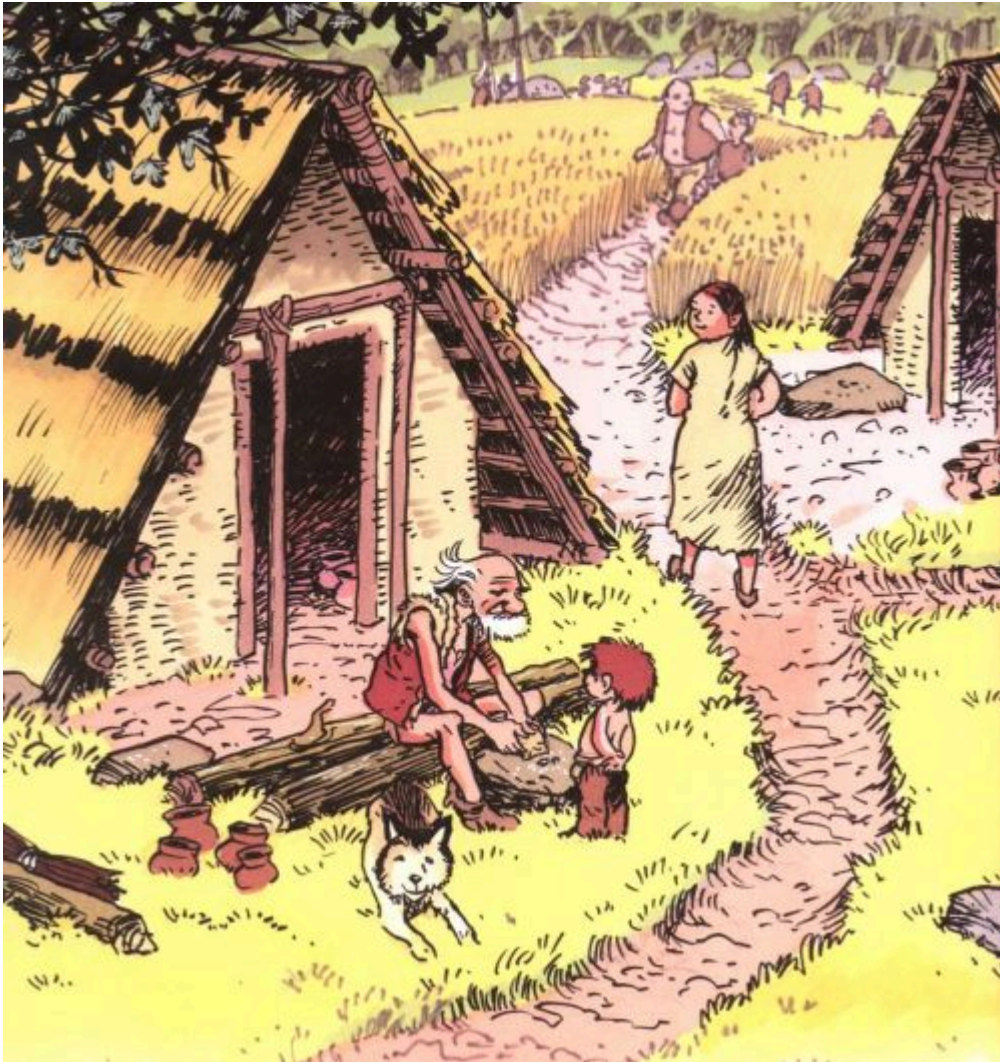
Figure 9. Image from 'de wereld van Oek' (Klompmaker, 2008).

Another use for comics to find their way into archaeological public outreach is seen in the book series 'de wereld van Oek' (see figure 9). A children's picture book written by the former director of the Hunebedcentrum in the Netherlands. The series tells the stories of a little boy growing up in neolithic times, showing differences and similarities between children of the times, giving modern kids who read the book some insight into the past as a concept, and cultures as a changing dynamic. Doing this with a historical theme can get children intrigued by the past, which can lead to them asking their parents to visit a museum, or gather more information on the subject. This is a very useful first step towards ensuring archaeology remains a valued academic field, as to keep digging, we need people who see the value of what we do. The fact that the museum director chose to write these books also shows that the idea is not new at all, and the ongoing success of the book series shows its merit. It also proves to an extent that archaeologists may be well suited to perform this work themselves, ensuring the quality of the products is up to our standards.

Starting with picture books for children is a good first approach, but does not make optimal use of the benefits the visual medium can provide. A more elaborate way of utilizing sequential art for archaeological benefits might be to draw the newsletter a local community receives, instead of providing them textual information that they might not be able to visualize themselves. Providing them with visual material, showing what for example has been done on a site near their location, can heighten local interest and provide a community with an additional historical background to their local identity. It can give them better understanding of the place they live in, by showing in an engaging and visual way what their history looks like in the research done in their area. This visual representation can draw in more enthused onlookers than a simple newsletter can. This might help enhance local interest even more. Examples of this type of usage are given by the dutch 'Drents museum' who have published a short half-comic book (a comic with half pages containing regular text for extra explanation) for an exhibition they had, as long ago as 1979 (van Voorn, 1979) see figure 10.
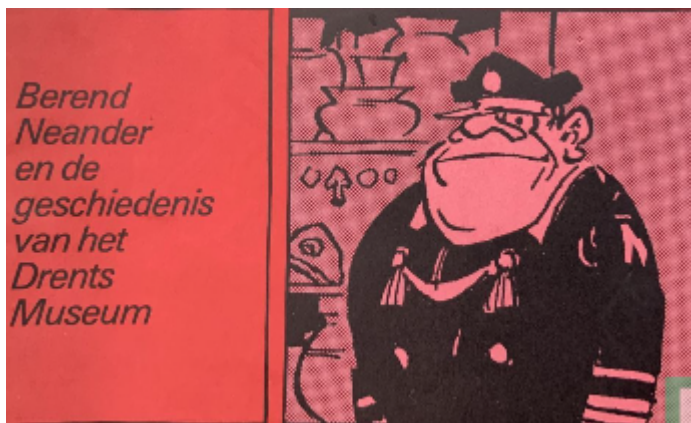

Figure 10. Cover of 'Berend Neander'. A half-comic to teach the history of the museum (van Voorn, 1979).

The book explains the history of the museum, and how exhibitions are formed. A process like this is also an interesting subject for visualization as it helps understand processes that are, in the present day, unseen by onlookers in the museum. Another example can be found in Palau. The island uses a comic about an excavation in 2015 as its official source on the subject, showing it in poster format as part of their public outreach programme (see figure 11) and doubling as a record for the excavation for students and staff of the project as well (Swogger, 2015).
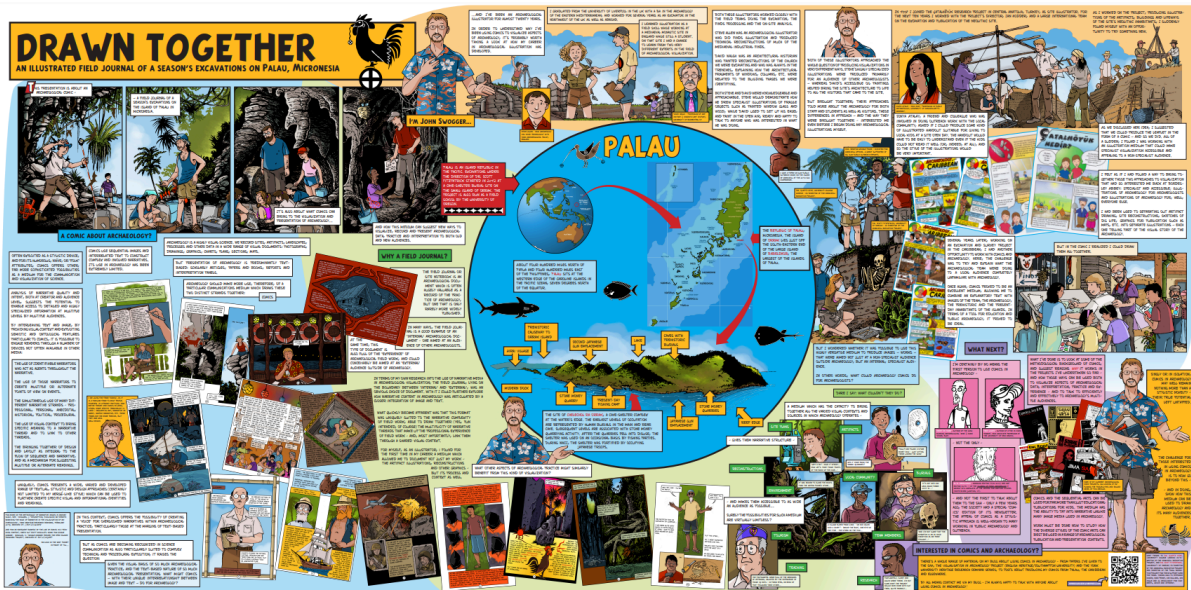
Figure 11. Palau outreach poster. (for full size version, see link in the reference list) (Swogger, 2013).

Combining field recording and public outreach may also provide an added benefit in the time it takes for both these steps to create. Being able to use the material suited for the first, as material for the second too, saves some time in producing the same subject matter in yet another way. This may be offset by the time it takes to produce visual material versus textual material, but it may result in a total time quite close to the time the process takes now.

Add into this segment the effect of comic series like Asterix, spreading archaeological interest to a very widespread public, or publications like the dutch series 'Van nul tot nu' that is stocked in most dutch elementary school libraries. Asterix, while probably not needing an introduction, is a humoristic comic series about a village of Gaul warriors in the Roman empire era. It shows the historical period with a lot of winks to modern times, and is full of puns and jokes, as illustrated by figure 12.

Figure 12. A historical fact jokingly portrayed in the intro of Asterix the Gaul. (Goscinny & Uderzo, 1959, p. 5).

It is purely meant for entertainment, but the authors have always incorporated historical information and nods to specific events in their work. The series is the best selling comic in the world with millions of sales (Eg, 2023). Asterix reaches a wide range of audiences, and is a foundation of interest in archaeology without being meant as such. The comic seems to be what most archaeologists are asked about first when discussing the science with non-archaeologists, and has prompted museum exhibits about the history involved.

The other series, 'Van nul tot nu', is a Dutch educational work, spanning 5 books about the whole of Dutch history. Most dutch elementary schools have these works present it seems, and about half of my generation seems to be familiar with them. The series is about an old man and a little girl who start talking about history, and the man starts telling the entire history of the country as if he was there (see figure 5). The series is more educational than entertaining, but is meant for children and therefore somewhat brief or general in its explanations. It features jokes and is by no means not entertaining, but the main goal seems to have been education.

The more elaborate version would be an actual comic, a graphic novel of sorts, fully explaining the context and implications of a site. This use of outreach publication is better suited for when a site is fully researched, to give background information and context to visitors or other interested members of the public. For example the Dutch 'Drents museum' issued a publication on a dolmen site. It is directed towards children, and shows what can be imagined on a site, giving a young audience a way to interpret a site in a way that can be

comprehended, and also leaves a perhaps better or more lasting impression. This results in a better understanding, and enhanced interest.

This example has some overlap with the next category, namely introductory books about archaeology. When site or time specific information pieces are generalized towards a bigger area, a longer timeframe, or the general science of archaeology as a whole, these publications serve a bigger purpose than being a showcase for a museum, a site, a local community. They serve as general introductions to archaeology, and are better suited in library collections or school collections. Anyone already interested in one of the publications in the first category, can find more in depth material in this category. A good example is for instance 'Archaeology the Comic' (Loubser, 2003), a publication explaining archaeological processes, work methods and theoretical principles, to uninitiated audiences. This works very well as it quickly gives a basic grasp of the science, but being accessible enough for newer readers (see figure 13).
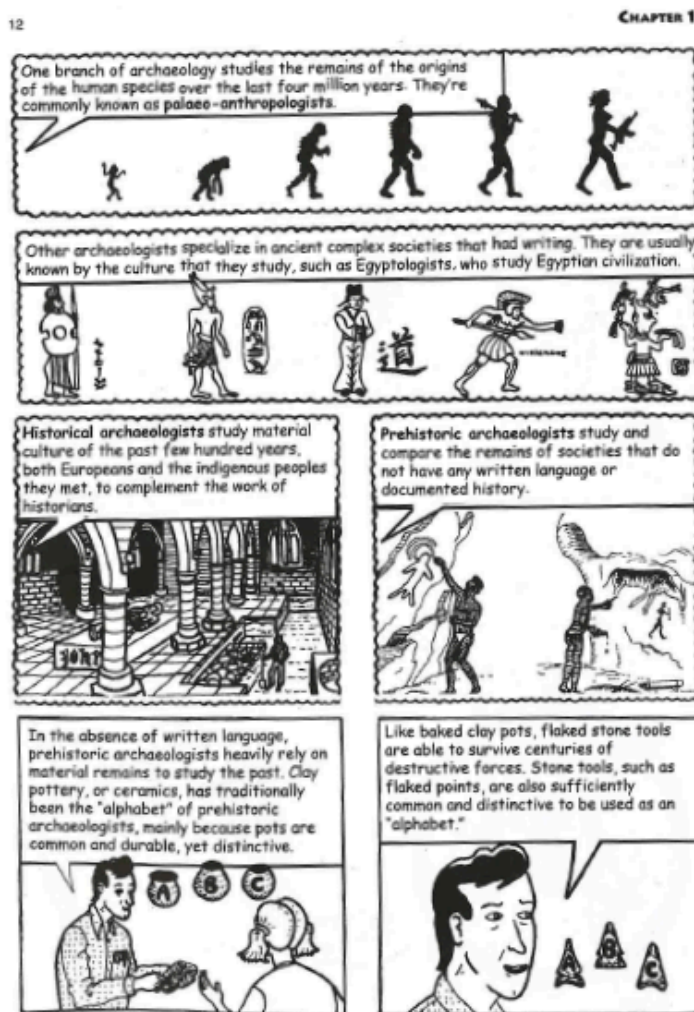
Figure 13. Example of how accessible archaeology can be portrayed (Loubser, 2003, p. 12).

The book is a fictional work in which a young girl and her family find interesting traces of archaeological material after they chase away treasure hunters from their property. Asking their neighbor what it might be, he directs them to an archaeologist for further explanation (see figure 14).
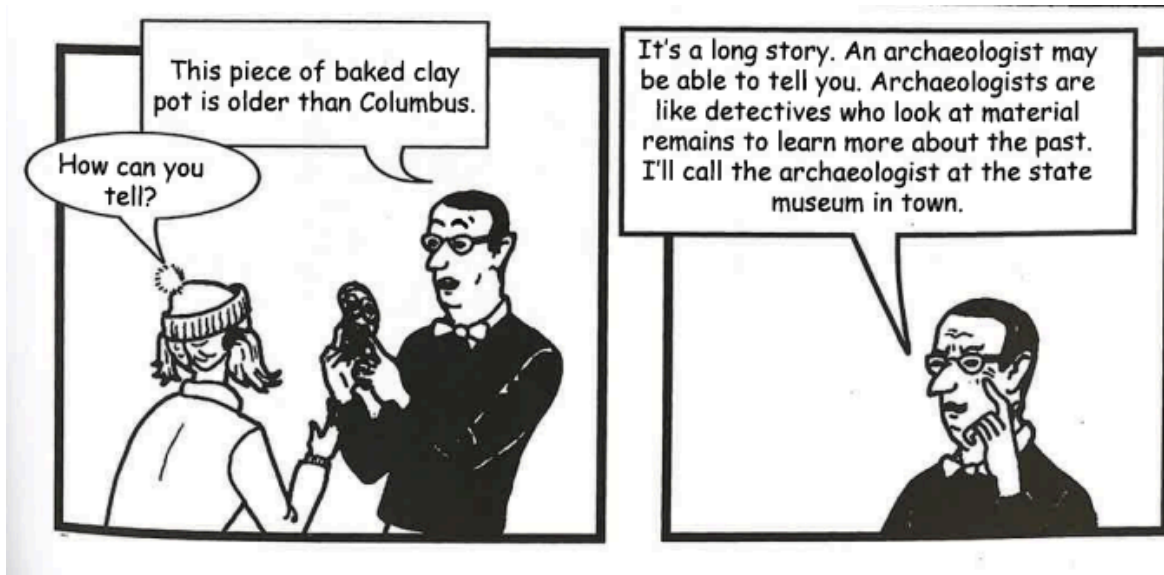

Figure 14. Loubsers characters' first steps toward archaeology (Loubser, 2003, p. 7).

This starts a journey in which the young girl gets more and more excited and hungry for knowledge about archaeology, learning about almost the whole range of archaeological practices of the time. The book serves as an example of how archaeology is performed, what the science contains and what the general questions in an archaeological study constitute. It is written for the general public, to educate more about a field of science that seemingly interests many, but also remains mysterious to most people. Some of this information is exceedingly more useful in debates around the world again, helping inform the public about facts instead of relying on the false information that usually fuels the internet.

The last category is actual archaeological, academic publication. Academic publications are drawn in a graphic style, making them more accessible. This additional way sequential art can be used is once again presented well by 'Archaeology, The Comic'. The book is not only a fictional work written for the general public, but due to the style and thoroughness of the explanations, it can be used as a university beginner course handbook as well. It has drawn examples of whole processes, for instance how Pompeii was formed as an archaeological site, (Loubser, 2003, p. 46) how carbon dating works (see figure 15) and how humans as a species have evolved (Loubser, 2003, p. 134).
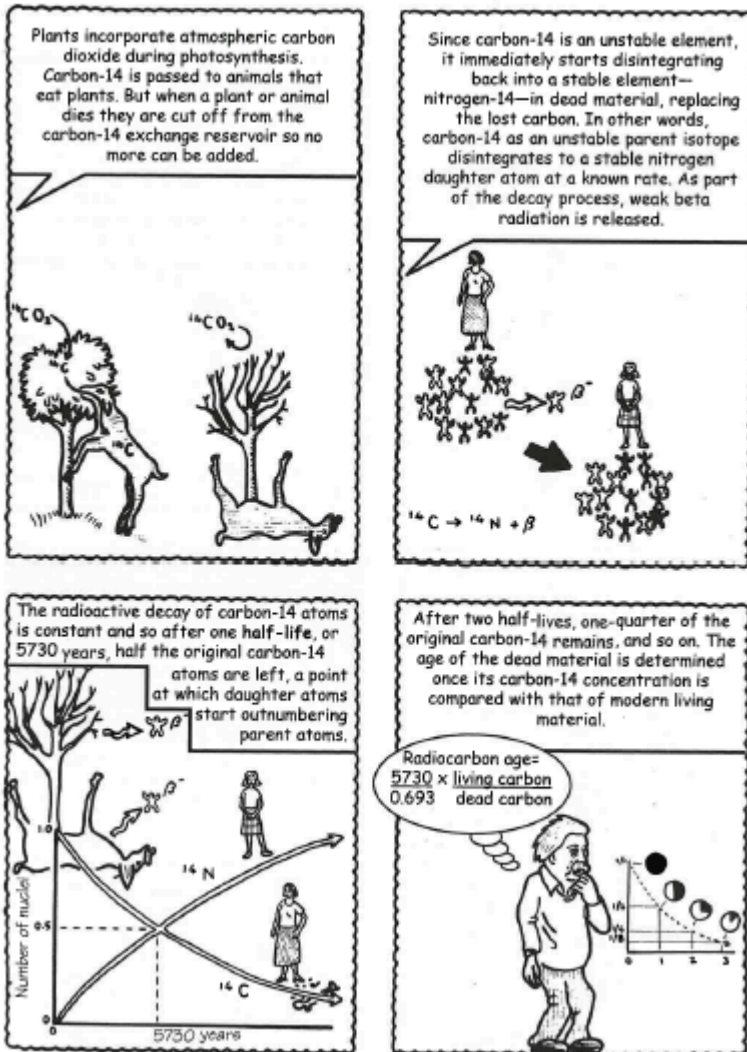
Figure 15. Excerpt from a chapter about dating processes, (Loubser, 2003, p. 75).

For use as an introductory book for non-archaeologists, that information may be too in-depth and perhaps a bit daunting, but for a student just beginning to learn about the concepts, it may be the perfect gateway into the archaeological methods that are mentioned. The way it is portrayed, not just the detailed style, but also the seemingly casual form of comic, is helpful for students with learning disabilities (Holmström, 2023) as well as opening options for other visualizations in publication. This allows authors to utilize this form of publication to show their material in a different, alternative or additive way. It can also provide alternative methods for academia in educating students. As an example, archaeological material culture can be shown in a systematic way, without losing the visual aspect too much. John Swogger provides an excellent example of this, in this re-drawing of the article "Ceramics and Polity in the Casas Grandes Area, Chihuahua, Mexico", by Whalen and Minnis (2012) shown in figure 16. Swogger explains in his text that his version of this article was created to show the

potential of drawing for academic purposes, shortening the amount of paper to be read and making the article more visually appealing (2015).

Figure 16. Example of how John Swogger portrays an academic article (Swogger, 2015, p. 4).

In conclusion, this chapter has shown a number of potential ways for archaeology to benefit from using visual media. Going from providing small children with their first encounter with the past to attracting a broader public by utilizing comics as a means of engagement. It has even shown ways to make use of the medium academically, by providing students with visual iterations of their literature, alternatives to their basic class materials, and showing context in a more truthful way by drawing entire academic publications. Even combining these factors is a possibility, making a bridge between field recording and public outreach an option. For a visual science like archaeology, the possibilities this medium offers seem endless, and with good examples of a number of these possibilities already in existence, the push for more material can start directly, instead of having to research other grounds to use the medium.

5. Discussion

In personal correspondence with Philip Yenawine, he noted that, even though comics in a home setting are regarded as an important educational means, the medium may still not be taken seriously enough by educational institutions. This discrepancy is also found in Seelow (2019, p. 5) who argues that the literacy skills he has drawn from comics were mostly gained outside of the institutions. It is interesting to study whether comics are not academically suitable, or if the medium is part of a branch of education that is often overlooked. If the latter is the case, then comics in education should get more attention. The public image of comics, newspaper cartoons, and even graphic novels as purely entertainment, meant for children, and not a credible source of information, even though this can be disproven, can be a major hurdle for its use in scientifically beneficial ways. On the other hand, though, giving the medium more credibility through its use in academic works can show the usefulness of the medium, the advantageous properties it may bring to education, and even making use of its entertaining side to improve the subject field's public perception. It is a double sided coin that can be flipped to its beneficial side by our field to start a cycle that goes in a positive direction.

Comics in education

As shown in earlier chapters, using comics in a formal educational setting is beneficial for gathering interest among students, to accommodate different types of students, and as a tool for improving a broad range of skill sets. Academic examples of how this can be utilized in general are plenty, yet archaeological examples are a lot more scarce. The few examples that do exist however, show great promise in the use of the medium, adapting archaeological themes to comic style with success. Why then has this not been replicated more? There seems to be only some sporadic effort towards incorporating comics into education, with most of the educational comics about the past being focused more on historical themes or pure entertainment. Universities do not seem to take the medium seriously as an educational tool, or perhaps they do not realize how they can implement the medium into their educational efforts. Seeing as the examples given before are successful in migrating archaeology to sequential art, a logical next step would be to implement a more formalized format or perhaps setting up a focal point for publication of archaeological educational comics.

Comics in outreach

Based on the previous chapters, comics are a valuable medium for archaeological outreach. The bright colors generally associated with comics draw attention, and comics are read by

diverse audiences worldwide. The fact that the medium is popular, and its best selling series historically themed, already makes it a good choice to use for outreach purposes. Additionally, as comics combine visual elements that are ever so present in archaeology, with textual explanations, an archaeologist can show the visual context and the expansive explanations on the same page, where traditional outreach methods commonly have these separated. Combining the popularity of comics with its potential to succinctly provide information make it an ideal medium for archeological outreach, since drawing the public to our research, one way or another, is the goal of archaeology's outreach efforts. Comics are a way to continue education in informal settings, as discussed in an earlier chapter, and as such are a good medium to bridge the educational part of outreach with the informal part of outreach. Comics are read in everyday places, and can show fun locations and interesting backgrounds of the setting we want to reach out about. By implementing comics into our outreach arsenal, archaeology can enlarge and diversify our potential audience. Outreach is not only about educating the public, but also about showing the public the fun of science. It is about opening up curiosity in the public, and having them realize that learning about these subjects can be done in fun ways too. Comics are a perfect medium for that, as they are already seen as doing exactly that. The examples shown in earlier chapters perfectly show that archaeology can be portrayed in comics, and that outreach through this medium can still be very informative. Combine this with the overlap comics and education already have, as seen in the previous paragraph, and archaeologists can use the tools at hand to really utilize the medium, and create a structured format to systematically use comics for outreach.

Comics for research

Using comics for research and academic education is perhaps the biggest challenge, but it may also be the biggest benefit archaeology can gain from the medium. As shown before, the medium can be adapted to educate, and this can also be utilized in academic context. The main example for this, 'Archaeology the Comic' can be used for all three purposes stated in this thesis, and is a valid option for all audiences. Universities may benefit from having their courses visualized, and academic publications may see the same benefit. The page count for an academic comic is also less than the page count for the same article in full text, so there may even be potential for journals to include more articles. This however is perhaps quite a stretch, seeing as comics are not seen as serious academic educational material, let alone serious academic material. Good examples do exist, so to disregard the option is not fair either. The biggest benefit for academia is perhaps the inclusivity that may be gained by including comics as part of the research material. The medium is widely understood, it opens up contextual debate, and is more accessible to include students with

learning disabilities. Comics can therefore help diversify the academic approach.

Starting up a new additional source of learning material is something that needs financing, and academic space to create the material as well. There would need to be a standardized set of rules for drawn versions of academic literature, extra peer reviewing to check if the information is conveyed well, and in the right way the original author wanted to convey. This costs extra time, extra money and is an additional step in an already lengthy process. Does archaeology really need this extra intellectual possibility, or is it too much to add? As an immediate retort, if a new medium can include more students, and convey information equally but differently, this can be beneficial for not only educational purposes, but also inclusivity as well. Is it then not something we should see as lacking at the moment, instead of being an addition in the future?

One of the main questions to answer this problem can be found in assessment of the demand for this type of medium. How many students are there that might benefit from visual literature? How big is the portion of the public we can additionally reach with visual representation of dig sites, overviews of projects and similar updates of our work?

Similarly, collecting hard data on the amounts of students that may benefit, or the amount of children that develop an interest big enough to pursue a career in archaeology, is almost impossible. We also cannot state an exact amount of public outreach growth, but with adding an extra medium to our toolkit we can enhance the potential growth and broaden the opportunities for growth. Ensuring this growth of the potential is what matters most, as it ensures not only the potential for more outreach, but also the potential of a diverse, more complete and inclusive toolkit for students to work with. This in turn then enables more types of students to be welcomed and reach their best academic skills. If archaeology wants to be a field of science accepting of all students, then creating a toolkit to provide a fundament for all students is a goal worth pursuing.

How many children will develop enough interest to pursue a career in archaeology, because of visual media they consume in their youth? It is a worthy question to wonder how big the impact of such a change in literature as I propose would be. If it is so hard to determine the reach of such a change, is it then not too much of a (financial) risk to take? However, the benefits for those that are impacted by such an addition to our outreach and academic material output far outweigh the potential setbacks. In a similar sense, there is almost no way of telling how many young potential students are missed because we don't use this medium already, but that is no basis alone to just implement it directly. Some of these questions can be answered by putting out questionnaires among students for example,

taking stock of students' wishes and using test groups to see possible benefits. Other questions may take a long while to answer, or dont give conclusive evidence at first glance. Are these then no longer to be taken into account, or are the startup costs/risks too great to make the material in the first place?

Finding out if the demand for such media as proposed may be too big a hurdle for a generalized approach, but seeing the recent growth of interest towards visual representation the first bits of data may have been collected already. We as a scientific field need to recognize the potential that we can perhaps use to our gain, and develop the medium to fit our needs.

If we conclude, as a scientific field, that this proposition is a necessary one, then how do we guarantee its quality is up to our standards? Should the author make their own graphic translations? It feels egregious to ask academics to be artists too, but if we hire outside artists, how do we convey the right information, without failing to misunderstand the archaeological context we hold so high in regard? Can we ensure providing all information, or should we create a form of 'academic sequential art' in a way similar to providing abstracts, only providing the basics for quick understanding.

6. Conclusion

In answer to the questions posed at the start of this thesis, one can state that archaeology, but also other fields of science, can benefit greatly from adopting and adapting the medium of comics to our own needs. Comics are undoubtedly a fine medium to transfer information in an entertaining way, and research backs the educational value of this as well. Not only can comics build necessary academic skills in young readers, they can also be used to draw attention, visually back-up contexts that are high in visual detail, as in archaeology they often are. Combining this with archaeological sciences not only seems a good fit, it more so seems unbelievable that it has not happened on a larger scale yet. Archaeology has multiple aspects of science that can benefit from using the medium, as shown in previous chapters. Seeing the work of a few archaeologists to pioneer the medium in their publication, it is clear that there are other researchers who seem to think the same way.

However, it is also quite obvious that more work needs to be done to fully understand the medium and its academic possibilities. In regard to style, there may be variations that better suit specific academic subjects, or better convey information to the general public instead of academic use. This aspect is something that would need some consideration, and further research to realize a standard that benefits the science.

Although there is no one method, not one correct way to use the medium, the options and possibilities are vast and diverse. For almost all of these varieties there have been good examples and publications to draw inspiration from, so the foundations are laid already, and academia can finetune these to better suit the needs we pick. As a general conclusion, it is safe to state there appears no real reason not to include the medium in our curriculum, as for all its drawbacks there are multitudes of benefits to balance the medium in a positive academic light. The medium is so versatile that growing the skills to utilize it can be a worthwhile pursuit as well, seeing as there can be plenty of ways to put the skill to use. Pair all these with contextual information and archaeological knowledge and a scholar may have a very unique but highly useful method of growing archaeological knowledge. Understanding the benefits of using comics is key, though, so educating scholars of the possibilities would be a necessity.

Abstract

This thesis summarizes multiple ways of using comics to positively grow the field of archaeology. To be able to state these ways, I show how comics can be a useful education tool and why adopting the medium can enrich our field of science. Once this has been established, an explanation of how comics can be used to enrich education is given, and then a variety of approaches for archaeology to benefit from the medium are examined. The approaches range from using the medium in public outreach, (children's) education and academic utilization. For each approach there are examples to show how academic pioneers have already tried to use the medium, and reasons to further understand the possibilities of using it further. I will discuss how archaeology can benefit from using the medium for diversifying our field of academic research, as well as some possible drawbacks of the medium such as cost and skill. In conclusion I explain how using comics shows a good possibility for archaeology to enrich our science, draw more people to our research, and include a more diverse part of society to enrich our collective capacity.

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