

RESEARCH PAPER

The Development of the Scientific Aesthetic in Archaeological Site Photography?

Charlotte Carter*

In this article, I shall introduce some core ideas from my research on the character of photographic representations published in archaeological journals during the mid-twentieth century. The aim of this study is to show the connection between the employment of certain scientific visual aesthetics in site photography at a time when the discipline of archaeology wanted to be seen as more scientific. Using the rod scale as a key visual metaphor for the identity of the discipline, I will argue that the increasing presence of the rod scale in published site photographs played a key part in the development of a specific scientific visual vocabulary which was driven by the contemporary culture-historical context.

All technical and scientific illustration is at once symbol and communication, a pictorial language addressing the author's audience side by side with his written text.

S. Piggott (1965: 165)

The semiotic observations by British archaeologist Stuart Piggott in 1965 concerning the visual programme in archaeological draughtsmanship signified a deeper understanding of the importance of visual representation in archaeology. There was recognition by archaeologists in the mid-twentieth century that the style in which they used to visually present their research or information was representative of a particular form of visual communication. This idea, which is characteristic of contextual hermeneutic theory, is relevant right from the beginning of archaeological photography. It acknowledges that a scientific image can also communicate multiple meanings to the viewer, such as political, religious and artistic interests. For the purposes of space, I will argue in this paper using quantitative and qualitative research that the rod scale is as equally important as a visual metaphor for an archaeological photograph as it is useful as a scientific tool.

To provide evidence for my argument, I have conducted a survey of archaeological site photographs published in six academic¹ and two popular journals² from 1950 to 1980, using various pictorial conventions such as scale, lighting and angle as units of analysis. For the period 1950 to 1980, upon surveying 1,085 individual articles with a total number of 17,129 illustrations published in the eight selected archaeological journals, 67%³

of published illustrations consisted of photographs, with 26%⁴ consisting of specifically site photographs. I have selected this time period for an examination of archaeological site photography because I would like to determine the extent to which archaeological photography behaved responsively or non-responsively to the scientifically-driven theoretical and methodological changes taking place within the discipline. Consequently, the key questions I would like to consider are what aesthetics make a photograph *archaeological*, are certain aesthetics associated with a specific scientific practice of archaeology, and are these aesthetics connected to the internal changes taking place in Processual Archaeology in the 1960s?

In the mid-twentieth century, the discipline of archaeology experienced many theoretical and methodological challenges for determining its *loci* within the humanities and sciences within university departments worldwide. The origins of these challenges are often attributed to the following three papers: *Method and Theory in American Archaeology* (1958) by American archaeologist's Gordon Willey and Philip Phillips; *Archaeology as Anthropology* (1962) by American archaeologist Lewis Binford; and *Analytical Archaeology* (1968) by English archaeologist David Clarke. The purpose of these papers was to raise questions concerning the way in which archaeological data was processed and interpreted in the past. Scholars began to criticize the culture-historical paradigm, originally proposed by the archaeologist Vere Gordon Childe (1892–1957), in favour of seeking a more rigorous application of scientific theoretical models and technologies for future archaeological investigations. Clarke summarised the Processual Archaeologists' beliefs as 'a set of questions rather than a set of answers' (Johnson 2007: 21). The impact of these papers, and many subsequent studies on contemporary archaeological theory was profound, and resulted in the discipline entering a phase commonly

* Department of Classics & Ancient History,
University of Exeter, UK
cay201@exeter.ac.uk

known as Processual Archaeology in the 1960s, in order to mark the distinction between antiquarianism and archaeology in the mid-twentieth century. In some circles of thought, the year 1962 is seen as a break off point, due to the publication of Binford's paper. However, I have chosen the period of 1950 to 1980 for the survey because I would like to consider the longer perspective and more nuanced changes that took place in the discipline, as it entered the phases of what is generally referred to as Processual archaeology.

The 1960s in the discipline of archaeology saw marked changes in the way that research was being conducted. A growing dissatisfaction with the discipline, led by aforementioned archaeologists, Lewis Binford in the United States, and David Clarke in the United Kingdom, paved a Processual path towards a scientifically-based approach towards the study and practice of archaeological investigation. Within Processual Archaeology, there was a common ground among all the different opinions of the scholars in the 1960s: 'we must be more scientific and more *anthropological*' (Johnson 2007: 20). It was believed that science was crucial for testing hypotheses about the relationships between archaeological cultures and the historical past since science penetrated a deeper understanding of the evidence. By drawing on the philosophy of science and critical theory, archaeologists in the 1960s advocated the use of scientific techniques to measure archaeological data in a heavily-theorised endorsed manner. Archaeological interpretation in Processual Archaeology was to become deduced from explicit questions, hypotheses and model-testing in order to produce critically informed conclusions based on scientific evidence, logical argument and evaluation. The overall aim was to transform the discipline from a descriptive to analytical approach, from antiquarianism to a Processual science with a 'proper' and 'unified' theoretical framework for the study of archaeology.

In this paper, I will show that my survey of site photographs published during the decades of the key debates in Processual archaeology is suggestive that there was an increasing concern for the publication of archaeological photographs with a scale. For the purposes of this study, I will be examining the increasing presence of the scale as a part of the visual aesthetic programme in site photography, and not the extent to which it is useful as an archaeological tool. I believe the photographic evidence is supportive of the idea that: a) the scale represented an important scientific visual feature in the construction of the archaeological record, and b) the scale was one of the major visual aesthetics which visually represented the concept of a professionalised (and scientific?)⁵ discipline during mid-twentieth century archaeological practice.

Previous Surveys on Visualisations in Archaeology

It is important to note here previous studies which have analysed the visual representation of archaeological knowledge using a survey methodology. A recent study published by Solometo and Moss (2013) on the draw-

ings of reconstructions of prehistoric life published in the *National Geographic* magazine from 1936 to 2007 has revealed a visual gender underrepresentation of women. The authors claim that the difference in gender representation provides evidence of 'temporal change in response to societal factors and editorial influences' (Solometo & Moss 2013: 123).⁶ Such reasoning may be applicable to other visual mediums in archaeological illustration, including archaeological photography.

Hallote's paper (2007) on 'Photography and the American Contribution to Early "Biblical" Archaeology, 1870–1920' argued that American archaeologists were ahead of their European contemporaries in photographically recording archaeological excavations in the Holy Land at the turn of the twentieth century. Using photographic archives of American investigations in Palestine, Hallote claimed that the Americans were 'deeply involved in the development of archaeological photography as a field distinct from commercial photography' through observation of 'specific stylistic [photographic] techniques to archaeological situations' (Hallote 2007: 26). The only aesthetics described by Hallote in this paper are the direction in which the photograph is taken, the people and the panoramic shot. She does not account for other major features involved in photographing archaeological sites including the framing of the subject, scale, lighting and angle in any significant detail. Although she acknowledged Petrie's contribution to British archaeological photography in Egypt, Hallote claimed that the American photographs of excavations in Palestine are a testament to American pioneering technological innovations. She supports this argument with the fact that the Americans published greater numbers of photographs in archaeological publications (namely *The Biblical Archaeologist*) in comparison to Europeans publications between 1870 and 1920. It is clear, therefore, that Hallote's line of argument is based on quantitative rather than qualitative data which is only partially useful and has the danger of not exploring in detail qualitative aspects (such as lighting) in archaeological photography.

Another survey conducted on the role of photography in visual literacy considered the idea of the camera as a 'tool' which assists the artist or scientist in creating 'proper form and perspective' (Goin 2001: 363). Goin's paper (2001) examined the relationship between photography and the construction of visual knowledge through a survey of five journals⁷ from the social sciences during the period 1990 to 2000. In his survey, Goin compared the number of articles, the number of photographs per article and the number of graphic illustrations. His chief research questions were concerned with the way in which photographs are used to signify factual information. His most important conclusion is that there is an 'underutilised and underrepresented potential for photographic collaboration' (364) in the publication of photographs in the social sciences. Interestingly, his ideas are relatively synonymous with the philosophical discussions on visual representation in archaeology undertaken by Smiles and Moser (2007), Molyneaux (1997) and Bonde and Houston (2013). It is with regret that Goin did not publish the data

from his survey which would have provided an interesting comparison with the data from my survey. However, what is clear from Solometo and Moss', Hallote's and Goin's studies is that a survey methodology can yield significant information about the application and utilisation of photography for the visual display of data during a specific culture-historical context.

Mid-Twentieth Century Literature on Archaeological Photography

It is possible to determine that certain visual aesthetics conditioned the idea of scientific archaeological site photography in archaeological publications in the mid-twentieth century. The following data analysis will reveal how implicit ideological values (i.e. the scale, a clean site and human presence) in the visual language of archaeological site photography occurred contemporaneously with the perception that archaeology had become a professional (and scientific?) discipline in the mid-twentieth century. The data collected from the survey will be explored using descriptive statistics as a way of identifying the existence of certain patterns which may emerge for certain categories, such as the inclusion of scale in a published site photograph. The application of Chi Square statistical analysis is not relevant for this data set since I am not using inferential statistics to examine the strengths or significances of any patterns at this stage.

The literature by British archaeologist Mortimer Wheeler (1890–1976), and archaeological photographers Maurice B. Cookson (d. 1965) and Alison Frantz (1903–1995), is useful for identifying the emergence of a particular and stylized visual grammar employed for the purposes of professional and scientific archaeological research. I will demonstrate how the rod scale provided the most quantifiable data for understanding the development of the scientific (or some may prefer technically accurate) record in archaeological photography.

The concern for an archaeological scale in early 1950s British archaeology can be located with Wheeler and Cookson. In 1951, Cookson published a three-part article on *Photography in Archaeology* which emphasized the importance of scale for the construction of an accurate and scientific record. In his 1954 publication entitled *Photography for Archaeologists*, Cookson reaffirmed the significance of the scale, claiming that 'all archaeological photographs must have a scale. This is indispensable- a photograph without a scale is useless because no idea can be formed of the size of the subject... Since the first aim of archaeological photography is to make a full scientific record, the photograph, however good it may be in other ways, is a wasted effort if it does not give some exact indication of size' (42). It is evident that Cookson believed the scale was not only a compulsory component for the creation of an archaeological photograph, but was necessary in constructing a scientific view of the archaeological subject. It is suggestive then that the scale became an increasingly integral part of the scientific practice of photographing archaeological subjects in the early 1950s.

The aim of archaeological photography in the 1950s was to produce a historical record based on scientific

examination of the archaeological material. Though the aim was scientific, the outcome could also be aesthetically pleasing. It seems from the archaeological literature of the 1950s that there was awkward discussion on how an archaeological photograph, produced in a scientific context, could also manifest artistic and aesthetically pleasing qualities. The lack of discussion on this particular issue highlights the presence of a visual tension between scientific and artistic practice. The reason for such was perhaps due to difficulty in explaining or understanding visual expressions or ideas at a time when the discipline of archaeology was also experiencing tensions between its practice as a science and an art. This can be further supported by the fact that Cookson's *Photography for Archaeologists* (1954) contained no bibliography, and the next significant publications on this subject were not until 1968 in Matthew's publication, *Photography in Archaeology and Art*, and in Simmons' *Archaeological Photography* in 1969. It is evident therefore that by the late 1960s, the tensions between artistic and scientific visual representations of the ancient world in archaeological photography became more prominent in academic publications. Whilst New Archaeology supported the idea of a scientific discipline of archaeology in the 1960s, archaeologists simultaneously acknowledged the role of art within the disciplines of archaeology and photography. In short, although the intention of archaeological photography may be scientific and documentary, the visual product could also be artistic and aesthetically pleasing to the eye.

Scale- a Visual Metaphor?

As a physical object, the scale is considered as a scientific tool of measurement by archaeologists. Placing a scale within an archaeological site photograph was already standard practice in archaeology before 1950. Using the scale as a key part of the visual aesthetic programme in archaeological site photography, I will explore the extent to which the increasing use and publication of the scale in archaeological site photography was perhaps in part a response to the contemporary great debates in archaeology in the 1960s, when the Processualists largely wanted to be seen as more scientific (Johnson 2007, 34).⁸ I will also examine whether the scale appears more in prehistoric than classical archaeological publications. This will enable me to test whether there was a greater effect of New Archaeology on European prehistory than classical archaeology, as attested by Johnson and other (modern) archaeologists (Johnson 2007: 29).

Graeme Barker observed that at her first presidential address to the Society of Antiquaries in 1960, Joan Evans criticised the focus of contemporary medieval archaeologists on plans of cow-sheds and rims of cooking pots. Barker argued that the criticism by Evans provided some evidence that "the New Archaeology of the 1960s was a threat to traditional culture history" (Barker 2007: 387). His brief study on the journals *Archaeologia* and *The Antiquaries Journal* from 1950 to 2000 revealed an 'inexorable' trend towards subject specialisation within the discipline, despite the Society of Antiquaries' desire to maintain the publication of recent fieldwork reports

on architecture and iconography. Thus it is important to recognise that the increasing fragmentation of research through specialisation was another characteristic of the scientific and professional drive of New Archaeology. However, while the subject content of the site photograph was becoming increasingly specialised, the visual aesthetics which emerged from the published photographs also became increasingly standardised in their composition, namely inclusion of a rod scale, a clean site and good lighting. It is possible that this visual concept was part of the phenomenon of an increasing interest in the scientific method and professionalization of the discipline.

In archaeological photography, Cookson and Wheeler regarded a card or rod with feet and inches or metres and centimetres markings, or human figures, as respectable forms of scale to be included within the photograph. But what is the purpose of including a scale in a photograph, and how is it linked to the scientific presentation of the site? Cookson believed that the scale was necessary in making a 'full scientific record' so that it can provide 'exact indication of size' (1954: 42). In a two-dimensional photograph, the scale can provide the viewer with a sense of size and spatial awareness between the archaeological features and the surrounding landscape within the frame of the image. Yet in visual communication, the scale is more than a physical object. It also acts as a visual aid in constructing a clear and accurate photograph which 'will be seen by people thousands of miles from the site' (42). Thus the scale represents a *universal* (in terms of general recognition) visual metaphor in the visual language of archaeology. Below are a number of examples from AJA of the use of scale in the form of a rod,⁹ tool¹⁰ and human.¹¹ Each example comes from a different article published between 1950 and 1980. It is evident from these site photographs how the *form* of the scale can affect the visual comprehension of the archaeological materials featured in the image. **Figure 1** shows a professionalised view of an archaeological subject with tight framing, a neutral camera angle, good lighting and the inclusion of two rod scales, graduated



Fig. 6. Altar in court of Northeast Wing, from southeast (photograph by Lord William Taylour)

Figure 1: Example of Rod Scale (1958).

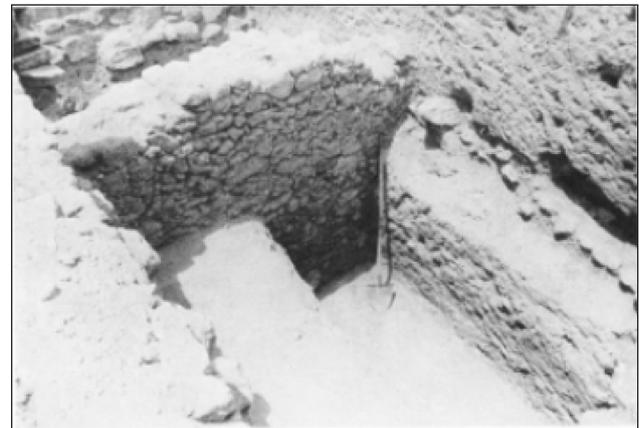


Fig. 5. Fifth-century walls underlying easternmost end of gymnasium

Figure 2: Example of Tool Scale (1964).

with both imperial and metric system measurements. The inclusion of these two rod scales means that the viewer can determine the size of the altar more accurately, since it is possible to work out which scale represents the imperial and metric system. In **Figure 2**, the spade in the corner of the trench serves to provide a sense of depth. However, the high angle and bright lighting of the photograph makes it difficult to gain an accurate sense of horizontal and vertical scale. When human figures are present in the site photographs, it is often difficult to ascertain the primary purpose for their inclusion. A solitary human figure on the periphery of a site generally implies that the purpose of their inclusion is to provide scale. However, there are also a considerable number of site photographs from the survey, including **Figure 3** above, which feature human activity upon the archaeological site. It is possible that human presence under these conditions serves two purposes: to provide scale, and to visually describe, explain and inform the physicality and scientific processes involved in archaeological fieldwork. Such images have raised important questions from an ethnographical perspective concerning gender and identity within the discipline of archaeology during the mid-twentieth century.

Data Analysis of Scale

In my survey, a total of 3,026 site photographs were published in all eight journals from 1950 to 1980. The total number of site photographs which included some form of scale (rod, tool or human) was 1,668 (see **Table 1**). This figure represents 55% out of the total number of site

Scale	No. of Site Photographs with Scale	% of Site Photographs (total 3,026)	% of Site Photographs with Scale (total 1,668)
Rod	915	30	54
Tool	164	5	9
Human	589	19	35

Table 1: Survey of Site Photographs in All Selected Archaeological Journals from 1950 to 1980.



FIG. 2. Karataş. Northeast side of complex with trial trenches

Figure 3: Example of Human Scale (1966).

photographs published. Although this number indicates that there is a greater majority of site photographs which contained scale from 1950 to 1980, it is surprising that just over half of the sample contained scale when considered in the context of contemporary literature on the subject of scale in archaeological photography. This is suggestive that not all archaeologists and editors upheld the idea that archaeological site photographs have no scientific value unless a scale is present. However, the primary data implies that the rod scale was the most preferable form of scale since it has the highest percentage of appearances in the site photographs.¹² It is also important to observe that the tool and human figure scales form together almost 50% of the total number of photographs with scale (see **Table 1**). This is suggestive that there was an appreciation and acceptance amongst practitioners for use of other forms of scale in photography of archaeological investigations. The reasons perhaps consisted of unavailability of the 'standard' form of scale (the rod), or that the rod scale was deemed unsuitable for the specific content of the image (such as a large complex of trenches as shown in **Figure 3**).

One of the most interesting finds from the primary data is the increase in presence of the rod scale in the site photographs recorded in the **Table 1** above. The results show a steady increase per decade from 1950 to 1980 for the inclusion of a rod scale within the frame of the photograph, in comparison with very little increase or decrease for the

tool and human scale. It is possible that this increase in the use of a rod scale for the publication of site photographs in archaeological journals was connected with the contemporary debates taking place within the discipline of archaeology concerning the scientific or technical practice of fieldwork research. The increasing inclusion of the rod scale in the site photograph suggests the acceptance of the rod scale as a scientific instrument in fieldwork practice. Yet it also suggests that perhaps there was a conscious awareness for the technical display of archaeological data in accordance with the scientific vision advocated by contemporary Processualists.

Dobie and Evans (2010) noted that when the archaeological drawing office in The Department of Ancient Monuments and Historic Buildings was founded in the early 1960s, there was already 'a view that excavations and publications should be less subjective more impersonal—as this approach was believed to be more scientific' (92). Therefore, we can consider the rod scale in these terms represented the objective and 'more scientific' approach to photographing the archaeological site. This was an idea propounded by Cookson in the 1950s and appears to have become part of the standard practice in site photography in the 1960s and 1970s. Thus it seems that the positive and increasing trend for the inclusion of the rod scale during the period 1950 to 1980 supports the idea that the scale had become an important visual feature and

Scale	Years	Total No. of Site Photographs	No. with Scale	% with Scale
Rod	1950–1959	852	85	10
	1960–1969	1,051	266	25
	1970–1980	1,123	564	50
	Total:	3,026	915	(AVG) 30
Tool	1950–1959	852	45	5
	1960–1969	1,051	53	5
	1970–1980	1,123	66	6
	Total:	3,026	164	(AVG) 5
Human	1950–1959	852	163	19
	1960–1969	1,051	222	21
	1970–1980	1,123	204	18
	Total:	3,026	589	(AVG) 19

Table 2: Survey of Site Photographs in All Selected Archaeological Journals in decades from 1950 to 1980.

metaphor in constructing a uniform and scientific visual language within archaeological site photography.

The table above shows that the first four out of the six academic journals surveyed showed an increasing trend in the presence of rod scale in the site photograph for each decade. The data indicates that the prehistoric journals had both the highest (PPS, 67%) and lowest (AA, 12%) average percentages of published site photographs with rod scale. This data offers an insight into whether the rod scale appeared more in prehistoric than classical journals. The data from **Table 4** implies that the rod scale did have a greater presence in the prehistoric journals, accounting for an average percentage of 37%¹³ of site photographs in comparison with 30%¹⁴ in the classical journals. Despite such differences between the prehistoric and classical journals in **Table 3**, the classical journal *Archaeologia* experienced a major increase in the publication of site photographs with rod scale, from zero in the 1950s to 60% in the 1970s. In addition, although AA shows an overall decrease in the publication of site photographs with rod scale, it must be noted that the journal experienced an increase of 6% during the 1960s. Although causality is difficult to determine in explaining the significant increase in the publication of site photographs with rod scale, it is interesting that this pattern is occurring at the same time as the great debates in archaeology. It is possible to infer that the increasing presence of the rod scale in site photography represented the standardisation and professionalization of what was considered to be an important scientific feature, and played an important part in developing the idea of a scientific visual narrative within the discipline in the mid-twentieth century.

Table 4 clearly shows that there was a steady increase on the inclusion of the rod scale in site photographs in both prehistoric and classical journals from 1950 to 1980. The prehistoric journals contained the highest percentage of

site photographs with a rod scale which suggests that perhaps prehistoric archaeology was visually more affected by the scientific drive taking place within the discipline at the time. It is important to observe that although the average percentage for the prehistoric journals is 7% higher, the percentage of site photographs with rod scale for the classical journals more than doubled between 1960s and 1970s (see **Table 4**). This significant increase could suggest that the classical journals were also driven by the same ideas occurring within the debates in the discipline at the time on the technical presentation of archaeological data.

Placement of the Rod Scale

The inclusion of a rod scale in a site photograph is one aspect. However, it is not just the increasing presence of the rod scale which affected the visual narrative in site photography from 1950 to 1980, but also the particular

Journal	Years	Total No. of Site Photographs	No. with Scale (Rod)	% with Scale (Rod)
AJA	1950–1959	148	12	8
	1960–1969	265	47	18
	1970–1980	292	150	51
	Total:	705	209	(AVG) 29
Archaeologia	1950–1959	162	0	0
	1960–1969	104	26	25
	1970–1980	289	173	60
	Total:	555	199	(AVG) 36
PBSR	1950–1959	142	28	20
	1960–1969	112	20	18
	1970–1980	49	9	18
	Total:	303	57	(AVG) 19
Antiquity	1950–1959	97	10	10
	1960–1969	128	19	15
	1970–1980	117	36	31
	Total:	342	65	(AVG) 16
PPS	1950–1959	42	12	29
	1960–1969	194	122	63
	1970–1980	197	154	78
	Total:	433	288	(AVG) 67
AA	1950–1959	91	8	9
	1960–1969	119	18	15
	1970–1980	32	2	6
	Total:	242	28	(AVG) 12

Table 3: Increase/Decrease in presence of rod scale in academic journals in decades from 1950 to 1980.

Journal	Years	Total No. of Site Photographs	Total No. with Scale (Rod)	% of with Scale (Rod)
Prehistoric	1950–1959	230	30	13
	1960–1969	441	159	36
	1970–1980	346	192	55
	Total:	1,017	381	(AVG) 37
Classical	1950–1959	452	40	9
	1960–1969	481	93	19
	1970–1980	630	332	53
	Total:	1,563	465	(AVG) 30

Table 4: Increase in presence of rod scale in Prehistoric and Classical journals, in decades from 1950 to 1980.

placement of the rod scale within the site for the visual record. Some British surveyors already used rod scales for photographic documentation during expeditions to various geographical and historical sites soon after the invention of photography in 1839. **Figure 4** is a good example of the importance of providing scale in mid-nineteenth century visual documentation. This photograph was taken by John Burke as part of a British colonial survey team who examined the ruins of a temple in Norwah, Kashmir in 1869.¹⁵ The two rod scales are placed perpendicularly to emphasize the horizontal and vertical planes of the ruinous structure, driven probably by a scientific consideration in constructing a visual record of this site. Additionally, the image could also be interpreted for its potential colonial and Christian overtones. The formation of a cross by the two rod scales in the middle of the façade of the temple could also carry a distinctive religious meaning in terms of their symbolic appearance. **Figure 4** was additionally included in a discussion on the inclusion and usefulness of the rod scale in archaeological photography in Bohrer's *Photography and Archaeology* (2011). Unlike the aforementioned alternative readings of the image, Bohrer's analysis of the image was specifically concerned with a practical interpretation of the placement of the rod scale.

Although the placement of the scale is important in understanding the visual narrative, the origins of how the scale came to be used in archaeological photography has not been studied in any detail in modern scholarship. There is a general assumption that the rod scale has always been largely present in archaeological photography, and Bohrer's discussion on Burke's photograph is suggestive of such an idea. Bohrer focused on Burke's photograph in relation to the scientific method of archaeological research in the nineteenth and early twentieth centuries. Bohrer observed that 'the ruler itself soon took a place that was less central, so as to allow the photograph's subject to be approached more directly' (55). He compared Burke's 1869 photograph with a 1934 photograph of some stratigraphic detail from excavations in Khorsabad to illustrate the difference in the placement of the rod scale.

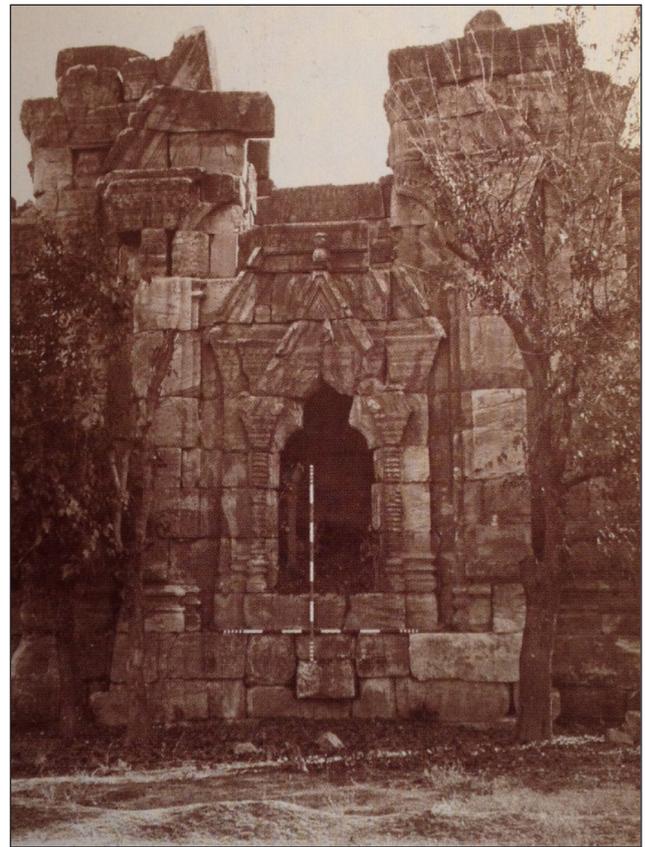


Figure 4: Photograph of Ruins of a Temple at Norwah, Kashmir (1869).

Such an observation on the peripheral placement of the scale within the photographic frame was also largely present in the site photographs I examined during my survey. However, **Figure 4** is not necessarily representative of the mid to late nineteenth and early twentieth century practice for the *inclusion* of scale in site photography. Conversely, a brief study of other contemporary photographic archives created during British archaeological expeditions to sites in a similar regional area to Burke's team at Kashmir reveal that the rod scale was in fact largely absent. The archives of Joseph Lawton's photographs of main archaeological sites in Sri Lanka during the 1870s¹⁶ and Frederick J. Richard's photographs of sites in Bellary, India 1913–14,¹⁷ show that human figures were mainly employed for providing scale. Moreover very few photographs, if any, included a rod scale amongst historical ruins. Thus if we accept the argument that generally the rod scale was not consistently included in archaeological site photography in the nineteenth century, then we can better appreciate and recognise the importance of the *increasing* inclusion of the rod scale in published site photographs during the mid-twentieth century. My data indicates therefore that the rod scale became a more visible and established part of the visual grammar in archaeological site photography.

Almost a century on from Burke's photographic exploration of India, Cookson marked out a specific aesthetic preference for the positioning of the scale within the photographic frame. He described in 1954 that it must appear 'unobtrusive and yet there to be used' (42). Following this advice, Cookson maintained that 'the matter of the scale

should be approached bearing in mind that, whilst the main purpose of the picture is scientific, there need be no conflict between science and pictorial sense' (43). This last sentence epitomizes the art and science debate of visual representations in archaeological illustration for the mid-twentieth century and also affirms the semiotic (multi-layered meanings) argumentation of Piggott. Cookson did not explain what he meant by 'pictorial sense,' however it is implicit that the author was referring to the idea of an aesthetic in the photograph which is pleasing to the eye as well as scientifically informative. It would seem therefore that Cookson's photography, at least to some extent, was based upon a dual presupposition which engaged with the scientific and 'pictorial' perspective of archaeological subjects. Cookson's work did not provide any examples of the 'correct' placement of the scale in his chapter on scale. However various photographs published throughout the book (see **Fig. 5**) reaffirm his written descriptions on the 'unobtrusive' placement of the scale within the frame.

It is evident that the scale was (and still is) a useful tool in archaeological photography for providing an indication of the size of an archaeological object or site feature. The data from the survey provides evidence that the scale became an integral feature in the visual grammar of archaeological illustration and represented a visual metaphor for the discipline of archaeology. However, although cumulatively the data presents us with a strong trend for the increasing presence of the rod scale from 1950 to 1980, interpretation of individual site photographs is difficult as we are faced with fundamentally the problem of subjectivity. It may be possible to overcome this problem by recognising that although the rod scale appeared in different formats, it is the volume of images with scale which indicates that it was a central feature of the visual aesthetics employed in archaeological photography during this period.

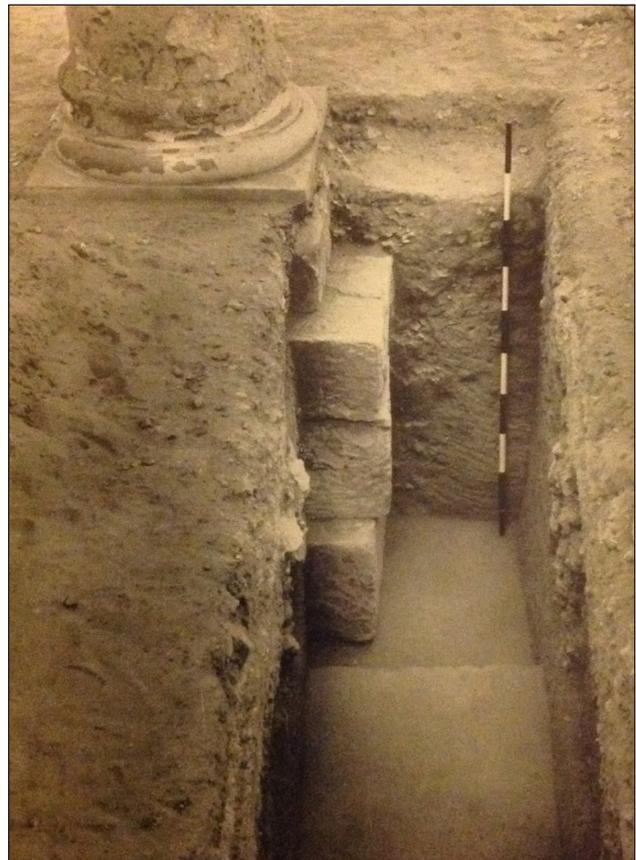


Figure 5: Photograph by M. B. Cookson to exemplify the preparation of a site photograph.

The two site photographs provided in **Figure 6** were published in an article on spirally fluted columns at Curium in Cyprus in *AJA* in 1956. The two images in **Figure 6** feature low angle and neutral level¹⁸ shots, with

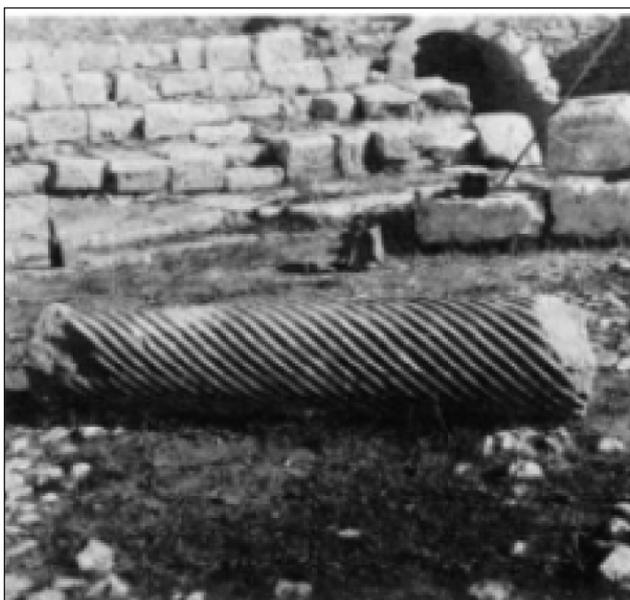


FIG. 2. Theater D



FIG. 3. Basilica C

Figure 6: Site Photographs of a section of a spirally fluted column in Cyprus published in *AJA*.

the point of interest in the central part of the frames. The photograph on the left shows that the absence of a rod scale makes it very difficult for the viewer to gauge some idea of the size of the column fragment in comparison with the photograph on the right. In the image on the right, the rod scale is not exactly perpendicular to the column, probably due to the uneven terrain on which it is situated. However, in terms of providing a scientific and technical view of the column, this photograph is exemplary of the suggestions put forward by Cookson, Frantz and Wheeler in the 1950s. The historical significance of the section of column only becomes clear when supported by the text of the article. The author describes that this section was discovered on open ground at a considerable distance from the theatre from which it is believed to have come, whereas other sections were located closer to the theatre, including the image on the left, but were hidden by underbrush (Benson 1956: 385).

It is interesting that the author has decided to publish two photographs next to each other on the same plate of different sections of column with and without scale. The rod scale is noticeably absent from the image on the left, and simultaneously very present in the image on the right. Thus **Figure 6** is particularly useful in showing how the presence and absence of the rod scale affects our viewing perspective of the sections of column. This example shows how the rod scale is especially important for decontextualized objects within the site, such as the fluted column. Furthermore, the inclusion of the scale in the image on the right supports the idea that the rod scale is an intrinsic part of the rendering process in what makes a photograph *archaeological*. If the image on the left was to be studied in isolation, it could also represent a different genre of photography such as art, travel or architecture. Therefore, in determining what visual aesthetics belong to the genre of archaeological photography, the rod scale represents perhaps the most visible, objective, technically accurate and scientific visual aesthetic.

It is important to note that not all site photographs published during this decade contained rod scale. Only 10% of the total number of site photographs from all the archaeological journals surveyed contained rod scale during 1950 to 1959, and only 8% of the total number of site photographs in *AJA*, the journal from which **Figure 6** is taken, included rod scale. This suggests that although the rod scale was considered to be an important scientific instrument in determining the size of archaeological objects within the photograph, it was not a feature that was necessarily required for the publication of all site photographs in archaeological journals at the time.

Conclusion

The adoption of certain visual aesthetics in archaeological photography have subsequently shaped, influenced, and to some extent standardised and contributed to the professionalization of our visual forms of historical knowledge for the interpretation of archaeological material. The rod scale represented a significant emerging trend within the history of the photographic visualisation of archaeological subjects, particularly during the mid-twentieth century. The scale, which visually embodied the idea of

scientific method and practice in archaeological research, also represented an aesthetic choice in the composition of site photography. This aesthetic choice can be most clearly detected by the presence and positioning of the scale within the photographic frame. The data clearly shows that there was an increasing presence of rod scale in published photographs from the 1950s to 1970s. It is possible that this increase was connected with the contemporary concern for a scientifically-applied practice of archaeology, which was heavily discussed and debated by the Processualists within the discipline at the time. By the 1970s, 50% of the site photographs surveyed in all of the archaeological journals contained a rod scale. This is a significant increase from just 10% of site photographs with rod scale in the 1950s (see **Table 2**). The figures for four journals showing a positive trend for increasing presence of the rod scale is suggestive that by the 1970s the inclusion of a rod scale in published photographs of archaeological sites was a visual idea adopted by the majority of practitioners, authors and editors.

The rod scale acted equally as a visual metaphor of the identity of the discipline archaeology as it did a scientific tool. The ways in which the rod scale was positioned within the site photograph also indicates that it was not only a scientific instrument, but also an *archaeological* aesthetic in the visual communication of archaeological information. How we visually perceive archaeology today was developed from visual ideas and representations in the recent past. It is important we are aware of these developments since they affect our understanding of visual knowledge in archaeology. In this paper, I have suggested that there are visual features, such as the scale, in an archaeological site photograph which can be used as a way of measuring spatial and temporal differences in the visualisation of an archaeological subject. Furthermore, I have suggested that during the mid-twentieth century, theoretical debates (both of the Processualists and of other archaeologist's reactions to their ideas) within archaeology did not just affect the written word or physical processes involved in excavation, but also affected the way in which we look, observe and record these processes using the camera as a primary visual tool. There are many factors too which affect the construction of an image such as the cost of equipment, the training of the photographer, the conditions of the environment, choice of the editor for publication of the images and so on. However, although these factors are significant, the archaeological site photograph published in an academic or popular journal will always maintain its importance for its visual creation of archaeological knowledge.

Notes

- ¹ Academic journals: *American Journal of Archaeology* (*AJA*), *American Antiquity* (*AA*), *Antiquity*, *Papers of the British School at Rome* (*PBSR*), *Proceedings of the Prehistoric Society* (*PPS*) and *Archaeologia*.
- ² Popular journals: *Archaeology* and *Current Archaeology* (*CA*). The latter was founded in 1967 so the journal has been surveyed from 1967 to 1980.
- ³ Total number of photographs: 11,499.
- ⁴ Total number of site photographs: 3,029.

- ⁵ The extent to which the discipline was seen as wholly scientific is questionable as not all archaeologists at this time agreed with the ideas proposed by the Processualists.
- ⁶ See also C. Lutz and J. L. Collins., (1993), *Reading National Geographic*, Chicago: University of Chicago Press, Chapter 4.
- ⁷ Goin states that he chose 'reputable' journals from the social sciences for his survey which included: *American Political Science Review*, *Environmental History Review*, *Geographical Review*, *Journal of Modern Literature* and *Visual Anthropology*.
- ⁸ 'We must be more scientific' was the slogan of New Archaeology.
- ⁹ Fig. 1 is from an article published in 1958 on 'The Palace of Nestor Excavations of 1957: Part I.'
- ¹⁰ Fig. 2 is from an article published in 1964 on 'Excavations at Morgantina (Serra Orlando) 1963 Preliminary Report VIII).'
- ¹¹ Fig. 2 is from an article published in 1966 on 'Excavations at Karataş-Semayük in Lycia, 1965.'
- ¹² The Total Number of Site Photographs of Human Scale does not necessarily include all photographs with human figures.
- ¹³ Grand total number of site photographs in prehistoric journals: 1,017. Grand total number with rod scale: 381.
- ¹⁴ Grand total number of site photographs in classical journals: 1,563. Grand total with rod scale: 464.
- ¹⁵ Photograph was published in H. H. Cole, *Ancient Buildings in Kashmir* (1869), Plate 34, from (Bohrer 2011, 55)
- ¹⁶ J. Lawton's archive of albumen prints of Sri Lanka is located at the Victoria & Albert Museum, London.
- ¹⁷ F. R. Richard's photographic archive of India is located at the Pitt Rivers Museum, Oxford.
- ¹⁸ Definition of Neutral Shot: a view of the subject as if you were directly facing the subject of the image.

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