SIR JOHN EVANS: EXPERIMENTAL FLINT KNAPPING AND THE ORIGINS OF LITHIC RESEARCH

Hugo Lamdin-Whymark

School of Humanities (Archaeology), Avenue Campus, University of Southampton, SO17 1BF, UK. Contact email: hugo@flintwork.co.uk

ABSTRACT

Sir John Evans is one of the founding fathers of Palaeolithic archaeology. In 1859 he, along with Joseph Prestwich, demonstrated the provenance of artefacts in the drift and that they were the product of the human hand, so proving the greater antiquity of humankind. This paper traces the origins of John Evans’ experimental flint knapping back to 1859 and explores how these experiments influenced his argument that the flints from the Somme were the product of the human hand. The paper also briefly explores the influence of John Evans’ experimental flint knapping on his approach to lithic analysis and the identification of fakes and frauds.


Keywords: Sir John Evans, Ancient Stone Implements, experimental flintknapping, archaeological fakes, Flint Jack

INTRODUCTION

Sir John Evans (17th November 1823–31st May 1908) was an eminent figure and arguably a model Victorian; a family man and a polymath with interests in business, hydrology, numismatics, geology, and, of course, archaeology (MacGregor 2008b). Archaeologists hold John Evans in particularly high esteem as a founding figure of Palaeolithic archaeology who, along with his good friend Joseph Prestwich, demonstrated the antiquity of humankind in 1859. For this feat alone he warrants a special place on the archaeological ‘wall of fame’, but arguably Evans’ most enduring legacy was his systematic and innovative research on lithics from the British Isles and further afield, culminating in the publication of The Ancient Stone Implements, Weapons and Ornaments of Great Britain in 1872 and a revised second edition in 1897. In this text Evans outlined Palaeolithic and Neolithic typologies and initiated research into artefact morphology and function (White 2001). He also provided the first complete gazetteer of Palaeolithic artefacts from Britain and set a benchmark for detailed illustration of lithics that few have exceeded (Roberts & Barton 2008).

As a distinguished figure Sir John Evans has been the focus of considerable research and publication. Most recently a co-authored volume, Sir John Evans 1823–1908: Antiquity, Commerce and Natural Science in the Age of Darwin, was published by the Ashmolean Museum to mark the centenary of John Evans’ death. This lavish volume explores key facets of John Evans’ life, interests and research, and represents essential reading for anyone wishing to
explore his life further (MacGregor 2008a). John Evans’ daughter, Joan, wrote an extensive biography (1943) and several papers have also been published on aspects of his career and life (Forrer 1909; Wintle 1982; White 2001). In this paper, I wish to consider John Evans’ early research into lithics and, especially, the influence of experimental flint knapping and artefact replication on his approach to lithic analysis. I will also briefly consider how Evans’ personal experience of flint knapping uniquely placed him as an authority on fakes and frauds in the context of Victorian Britain.

**A BRIEF BACKGROUND 1823–1857**

John Evans was born on the 17th November 1823 to Anne (née Dickinson) and Arthur Benoni Evans. His father was not a wealthy man, but earned a modest wage as the rector for Burnham, Buckinghamshire, and supplemented this income by tutoring pupils, many of whom lodged with the family (MacGregor 2008b). Arthur was later appointed headmaster of the free grammar school at Market Bosworth, where John completed his education. At sixteen years of age, after turning down the offer of a place at Oxford University, John Evans started work in the accounting office of a paper mill owned by his uncle John Dickinson in the village of Nash Mills, near Hemel Hempstead, Herefordshire. Through his own efforts, and an advantageous marriage to his uncle’s daughter Harriet, Evans was admitted as a junior partner in 1850 and by 1857 he was managing the business with his brother-in-law (Penwarden & Stanyon 2008). Evans was a successful and ultimately a wealthy businessman, seeking new markets and developing machinery that led to the registration of several patents (*ibid:* 43). His success in the commercial world allowed him to pursue academic interests and develop collections that rivalled any in Victorian England.

John Evans’ early passions included numismatics; an interest inherited from his father. He developed an extensive collection with a particular focus on early British coinage and from 1850 until his death he regularly wrote articles for the *Numismatic Chronicle*. Evans’ early interests in archaeology perhaps developed from his research on British coinage as his first excavations were on a Roman Villa at Boxmoor, Herefordshire, which was discovered during works at the railway station in 1852. Evans lectured on this site in St Albans, to an audience including Lord Verulam (Joan Evans 1943), and rapidly published an account of his excavations in *Archaeologia* (1852). He was elected to the Society of Antiquaries of London in December 1852 and continued his excavations at Boxmoor, publishing a second account in *Archaeologia* (1853).

Evans also held interests in geology and hydrology that developed from his work at Nash Mills and litigation with the Grand Junction Canal Company (GJCC) over the diversion of water from the mills by pumping ground water for the canal from a well. The dispute was resolved in April 1852 when John Dickinson and John Evans demonstrated the effect on their water supplies with a hydrological model and a permanent injunction was obtained against the GJCC. In light of this success John Evans acted as an expert witness in other water-rights cases and this led him to meet Joseph Prestwich (c. 1855) who was acting as the rival expert in one case (Joan Evans 1943: 83). As a result of this chance meeting John Evans and Joseph Prestwich developed a close friendship based on their interests in geology, and they undertook regular excursions to the gravels around Tring, Slapton and Leighton Buzzard (Joan Evans 1943: 89). Evans was elected a Fellow of the Geological Society in 1857.

As the outline above demonstrates, by 1857 Evans had developed strong interests in both archaeology and geology, but his interests in
prehistory and lithics were still embryonic. Indeed, Evans records in *Ancient Stone Implements* that the first stone tool to enter his collection was a fragment of a Neolithic polished axe which he found at Eastbourne in 1852, and records of his collection reveal that he did not actively start to collect lithics until after his visit to the Somme in 1859 (John Evans 1897; Roberts & Barton 2008). Evans’ interest in prehistory was to develop from 1858 during a period of his life that was marked by a personal tragedy. His wife, Harriett, was taken ill following the birth of their fifth child on the 19th December 1857 and she died on New Year’s morning 1858 (Joan Evans 1943: 93).

**THE FRENCH CONNECTION**

John Evans’ interest in the antiquity of the drift deposits was spurred on by the research of Joseph Prestwich, and in April 1858 they went to see elephant bones discovered in a railway cutting near Bedford (Joan Evans 1943: 97; cf. Pope & Roberts, this volume). These discoveries, coupled with Jacques Boucher de Perthes finds in the gravels of the Somme around Abbeville, France, were beginning to rouse Evans’ interests. In March 1859, John Evans recorded in his diary:

“Think of their finding flint axes and arrowheads at Abbeville in conjunction with the bones of Elephants and Rhinoceroses 40 ft. below the surface in a bed of drift. In this bone cave in Devonshire now being excavated by the Geological Society they say they have found arrowheads among the bones, and the same is reported for a cave in Sicily. I can hardly believe it. It will make my ancient Britons quite modern if man is carried back in England to the days when Elephants, Rhinoceroses, Hippopotamuses and Tigers were also inhabitants of the country...”

(Joan Evans 1943: 100)

M. Boucher de Perthes had reported his finds as early as 1837, but the scientific community had greeted news of these discoveries with scepticism. This was in part due to extravagant claims by M. Boucher de Perthes that went well beyond the archaeological evidence and masked the important lithic discoveries that he had made (John Evans 1860b; White 2001; cf. Gowlett, this volume). Times were changing though, and by the late 1850s the scientific community was becoming increasing open to ideas of the greater antiquity of humankind. Joseph Prestwich saw the potential in Boucher de Perthes’ discoveries to directly address this issue and he organised a party from the Geological Society to visit the Somme in late April 1859. For various reasons other members of the party were unable to attend and only John Evans arrived at Abbeville train station on the 27th April 1859. Evans records in his diary that their “object was if possible to ascertain that these axes had been actually deposited with the gravel, and not subsequently introduced” (Joan Evans 1943: 101). The visit was initially without success as the local quarries were bereft of artefacts, but, through M. Boucher de Perthes’ contacts, information arrived that there was an axe to be seen *in situ* at Amiens (Joan Evans 1943: 101). Evans recorded in his diary that:

“We proceeded to the pit where sure enough the edge of an axe was visible in an entirely undisturbed bed of gravel and eleven feet from the surface. We had a photographer with us to take a view of it so as to corroborate our testimony and had only time to get that done and collect some 12 or 15 axes from the workmen in the pit...”

(Joan Evans 1943: 102)

Witnessing the discovery of an axe in the gravels was the evidence that Prestwich and Evans required. Arguably though, getting this evidence was easier than the process of convincing the scientific community and wider population of their discoveries’ implications for the prolonged history of humankind.
REVEALING THE OLD STONE AGE

The stage was set for John Evans and Joseph Prestwich to announce their dramatic discoveries and on their return from France they wasted no time in addressing the highest echelons of the scientific community. Joseph Prestwich first revealed their discoveries to the Royal Society on the 26th May, but having left without John Evans’ communication on the flint implements that he was to incorporate into his lecture it fell on Evans to provide an additional impromptu lecture. The following week, on the 2nd June 1859, John Evans reported their discoveries to the Society of Antiquaries of London and publications in Archaeologia and Philosophical Transactions appeared the following year.

Due to the wide reaching implications of their discovery, it was imperative that a water-tight case was made for the antiquity and human origin of these tools. Prestwich focussed on the geological context, while the task of convincing a sceptical audience that the axes and flakes were the product of the human hand fell to John Evans. Evans had to develop an original argument to convince the scientific community that these tools were more than geological curios or accidental forms. In his article On the occurrence of flint implements in undisturbed beds of gravel, sand and clay (1860b), Evans begins by arguing that the regularity of the artefacts implies design:

“That they really are implements fashioned by the hand of man, a single glance at a collection of them placed side by side, so as to show the analogy of form of the various specimens, would, I think, be sufficient to convince even the most sceptical. There is a uniformity of shape, a correctness of outline, and a sharpness about the cutting edges and points, which cannot be due to anything but design; so that I need not stay to combat the opinion that might otherwise possibly have arisen that the weapon-like shapes of the flints were due to some natural configuration, or arose from some inherent tendency to a peculiar form of fracture.”

(John Evans 1860b: 288)

Evans further supported his morphological arguments by discussing the method of manufacture of Palaeolithic axes, with an oblique reference to the replication of prehistoric artefacts:

“The manner in which they have been fashioned appears to have been by blows from a rounded pebble mounted as a hammer, administered directly upon the edge of the implements, so as to strike off flakes on either side. At all events I have by this means reproduced some of the forms in flint, and the edges of the implements thus made present precisely the same character of fracture as those from the drift.”

(John Evans 1860b: 293)

It therefore appears that John Evans’ understanding of lithic technology derived from both the study of the artefacts and artefact replication, although he only makes limited reference to the latter. Moreover, in Archaeologia (1860b) it is unclear if Evans is referring to his own efforts at experimental knapping or those of someone else. In an article published in Records of Buckinghamshire (1860a) resulting from a meeting held on the 5th January 1860 (which appears to represent the transcription of a lecture as it is written in the third person), Evans is more forthcoming:

“...he showed from the general similarity in form, the nature of the chipped edges their analogy to a certain extent with weapons of a later period, that there could be no reasonable doubt as to their having been really formed by the hand of man. An objection had been raised by some that these forms could not have been chipped out by people unacquainted with the use of metals, but he had himself experimented upon this point, and had produced the form of one of the implements with precisely the same character of edge, by chipping one out of a
"block of flint by means of a rounded pebble."

(John Evans 1860a: 141)

The date of this article can leave little doubt that flint knapping and artefact replication was pivotal to John Evans’ argument that the flints from the drift were the product of the human hand. Moreover, he appears to have developed this approach and argument around the time he first visited the Somme. It still remains unclear precisely when John Evans first learned to flint knap, but in a diary entry Evans notes that he celebrated his birthday (17th November 1859) by making ‘a pretty good flint axe’ (Joan Evans 1943: 105). It is also unclear if he developed these skills independently or was taught by gun flint knappers. There is no reference to gun flint knappers in either his 1860 or 1863 Archaeologia papers, but he was certainly acquainted with the industry by 1863 when he reported on a series of French forgeries (Roberts & Barton 2008). It is, however, possible to speculate that John Evans may have first met the East Anglian flint knappers on his honeymoon, following his second marriage to Fanny Phelps on the 23rd July 1859. In what can only be described as a two week archaeological tour they visited several gravel pits, but most significantly they visited Ely and Norwich, which were only a short distance from the surviving centres of the gun flint industry at Icklingham and Brandon (Joan Evans 1943: 105).

Evans developed his thoughts on the value of replicating ancient technologies and in Ancient Stone Implements (1872) he opens chapter two with the bold statement:

“In seeking to ascertain the method by which the stone implements and weapons of antiquity were fabricated, we cannot, in all probability, follow a better guide than that which is afforded us by the manner in which instruments of similar character are produced at the present day.”

(John Evans 1872: 13)

This quote, however, is not an introduction to Evans’ flint knapping experiments, as he proceeds to illustrate flint knapping and lithic technology with a description of gun flint manufacture and several ethnographic examples. Indeed, Evans only makes four references to his own flint knapping experiments in the 622 pages of the first edition of Ancient Stone Implements. These comprise the manufacture of flakes by direct hard hammer percussion (ibid: 20), the manufacture of flakes by indirect percussion with a punch (ibid: 22), the manufacture of scrapers (ibid: 33), and the manufacture of leaf-shaped and barbed and tanged arrowheads using a flint fabricator (ibid: 38).

In one case, before describing his attempts at manufacturing scrapers, he further expounds the value of replication studies:

“...I think that if, at the present time, we are able to produce tools precisely similar to the ancient ‘scrapers’ by the most simple way possible, and without the aid of metallic appliances, there is every probability that identically the same means were employed of old. Now, I have found by experiment that, taking a flake of flint (made, I may remark, with a stone hammer, consisting of a flint or quartzite pebble held in the hand), and placing it, with the flat face upwards, on a smooth block of stone, I can, by successive blows of the pebble, chip the end of the flake without any difficulty into the desired form.”

(John Evans 1872: 33)

In contrast to John Evans’ own publications, there are many references to his flint knapping skills in other publications. In 1870 Edward Stevens in Flint Chips, a catalogue of flints from the Blackmore Museum, Salisbury, records that:

“At a recent meeting of the International Congress of Prehistoric Archaeology at Norwich (1868), Mr. John Evans made flint scrapers and tools by pressure as well as by percussion, demonstrating the possibility of accomplishing the work by both methods. The tool used by Mr. Evans for flaking by
pressure was a piece of stag’s horn, having a chisel end…”

(E.T. Stevens 1870: 84)

Moreover, Stevens goes on to state:

“Mr. Evans long since suggested that the flint implements found in the drift had been formed by blows given with a rounded pebble, but he did not give this opinion until he had himself reproduced some of the forms in flint, with such a hammer.”

(E.T. Stevens 1870: 85)

John Evans’ own daughter, Joan, also states that he was a “skilled maker of flint implements” who “worked with reindeer horn” (Joan Evans 1943: 119). Evans also shared his knapping skills with other archaeologists. In 1875, Lane Fox (Pit Rivers) wrote that John Evans had taught him the ‘art’ of knapping flint celts (Johnson 1978; Roberts & Barton 2008) and in c. 1882 Evans showed Joseph Stevens how to manufacture scrapers while in a gravel quarry on Caversham Hill, Reading (J. Stevens 1894: 17). Few examples of John Evans’ flint knapping survive, but the Ashmolean Museum hold a small collection of artefacts, including an ovate handaxe and a small number of leaf-shaped and barbed and tanged arrowheads, which demonstrate his skill (White 2001; Roberts & Barton 2008).

The emphasis that John Evans places on the value of modern replication for understanding past technologies therefore dramatically contrasts with the comparatively limited references he makes in print to his own flint knapping experiments. Indeed, at first this seems almost inexplicable, but two possible explanations may be presented. Firstly, Charles Darwin’s theory of evolution, published in On the Origin of Species in November 1859, strongly influenced anthropological research through the mid to late Victorian period and increasingly extreme views of social evolution were being expressed. Modern stone-using societies were considered to have been left behind by evolution and were increasingly termed primitive or savage. But these views were not solely applied to foreign societies as, for example, in 1880 an anthropological study of the Brandon gun flint knappers argued for the continuity of flint knapping from the Palaeolithic and concluded that the local population were the remnants of an ancient British race (Park Harrison 1880). In this social context Evans may have been prudent not to mention his own primitive skills, as he may have been caricatured as a savage, as Darwin was as an ape. If this was the case, further credit is due to John Evans for recognising the importance of replication studies and pursuing this branch of lithic studies regardless of the potential stigma it held. It was in fact not until the 1960s, a full century after Evans, that the full potential of replication studies for the interpretation past lithic industries was recognised (Johnson 1978). This avenue of lithic research continues to be fruitful to the present day and has heavily influenced the present author’s research. A second possible reason could be that Evans may not have wished to encourage flint knapping as, whilst he made replicas to imitate originals, many others made forgeries to deceive the unsuspecting collector (E.T. Stevens 1870).

THE GENTLEMAN AND THE THIEF: FAKEs AND FRAUDs IN VICTORIAN ENGLAND

Evans’ and Prestwich’s discoveries of 1859 created a demand for lithic artefacts to fill the curiosity cabinets of respected gentlemen who sought to represent their breadth of knowledge through collections of geological, archaeological and cultural objects. In response to this demand an antiquities market developed and, in parallel, an illicit market in fakes emerged. Fakes and frauds were a problem in all areas of the antiques market, from provision of false provenances to Arretine Wares in London (Marsh 1979), to the mass production of ‘medieval’ lead
pilgrims badges and medallions by William Smith and Charles Eaton (known as Billie and Charlie) which scandalised the archaeological establishment in the 1850s and 1860s (John Evans 1893; Noël Hume 1956). Evans’ broad collecting interests, and particularly his experience of handling and replicating flints, ideally placed him to address the issue of forgery and he was clearly passionate about this subject. Evans first delivered a lecture *The Forgery of Antiquities* to the Royal Institution on the 24th February 1863 and numerous variations and updated versions of this lecture were published in newspapers and gentleman’s magazines until the 1890s (John Evans 1893).

The most notorious Victorian forger of flint artefacts was an itinerant thief, Edward Simpson, who was better known by his alias, Flint Jack. Flint Jack began forging flints in c. 1856, but in 1859 he was exposed as a forger and he began to earn “a somewhat more honest penny by publicly exhibiting his process of manufacture”, between stints in prison for theft (John Evans 1893). On the 7th January 1862 he demonstrated flint knapping to the Geological Society in London, where he produced various arrowheads, selling them to the audience for six-pence apiece (J. Stevens 1894), and in 1863 he was invited to the Blackmore Museum, Salisbury, where he produced a series of artefacts for their collection (E.T. Stevens 1870). Flint Jack’s replicas, or ‘dooplicates’ as he is said to have referred to them, are relatively crude having been manufactured using a steel hammer and an iron rod (J. Stevens 1894: 9) and John Evans commented that his tools were ‘coarse and less deceptive’ than those of other forgers (John Evans 1893: 15). Ironically, Flint Jack’s public demonstrations secured his notoriety as a forger and many of his artefacts were intentionally collected, but his activities highlight a fraudulent market primarily aimed at deceiving inexperienced collectors.

Small time forgers, such as Flint Jack, were clearly a problem for the uninformed collector, but John Evans was particularly concerned with identifying more deceitful frauds. In *Ancient Stone Implements* Evans describes methods of identifying fakes and various processes that forgers may use to make artefacts appear ancient (John Evans 1897). A particularly serious problem was the seeding of archaeological sites to deceive serious collectors and scientific study. In the mid Victorian period Evans considered that this was more of a problem in France than England (ibid: 658) but, as the Piltdown Fraud would later demonstrate, this would not always remain the case. The most controversial episode of forgery and fraud in the 1860s emerged from a quarry at Moulin Quignon in the Somme. In 1863 M. Boucher de Perthes made a series of new discoveries in this quarry, including numerous flint implements and a human jaw. These discoveries sent a ripple of excitement through the scientific community and Evans and Prestwich visited France to see them at first hand. They were, however, not convinced by the artefacts and considered that the workmen had probably manufactured the flints for sale (Joan Evans 1943: 117). The controversy rumbled on for some months, with axes sent between various parties, as M. Boucher de Perthes was insistent that they were genuine. It was not until a second visit by the pair in the company of other geologists that an axe emerged from the quarry smeared with mud that still showed the finger-marks of the forger and resolved the dispute beyond question (ibid.). The subtlety of Evans’ observations, combined with his experience of flint knapping and knowledge of the gun flint knappers methods, made him an authority on fakes, and after this affair Eduard Lartet declared Evans’ “Inspector general of all forgeries on both sides of the Channel” (ibid: 119)!
CONCLUSIONS

This paper has only scratched the surface of Sir John Evans’ contribution to archaeology and lithic studies. In terms of Palaeolithic archaeology John Evans warrants a special place in history for his part in demonstrating the antiquity of drift and that the artefacts recovered were the product of the human hand. In particular, I have chosen to emphasise his innovative use of flint knapping from 1859, firstly to formulate arguments to convince the world that the stone artefacts from the drift were the product of the human hand, and also to demonstrate and reconstruct ancient technologies. For various reasons John Evans chose not to emphasise his flint knapping skills in print, but it is important to acknowledge that the information his flint knapping experiments provided him with is expressed through his exquisite technological and typological descriptions, as exemplified in Ancient Stone Implements (1872, 1897). Moreover, his experience of manufacturing flints uniquely placed him to address the issue of fakes and frauds that proliferated in the Victorian Period and allowed him to become an authority on the subject. John Evans was therefore an innovator as well as a pioneer and he provided the foundation for research that is ongoing today.

REFERENCES