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A chimpanzee skull in the devil's cave

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Paleontological pranks

One hundred years ago, on 18 December 1912 at the reunion of the Geological Society in London Charles Dawson and Arthur Woodward read a paper 'On the discovery of a Paleolithic human skull and mandible'. Dawson, an amateur archaeologist, and Woodward, a palaeontologist, baptized their discovery *Eonanthropus dawsoni*, dawn-man, and British media raved about the discovery of this 'Ancient Briton'.¹ Soon this so-called 'Piltdown man' would claim a prominent position in the genealogical tree. Only 41 years later, in November 1953 it was proven that somebody had deliberately planted the 'fossils' in a gravel pit in Sussex. The fragments of the skull in fact belonged to a mediaeval human, the mandible to an orang-utan. The bones had been treated chemically in order to look fossilized, the ape teeth had been filed to look more human. We still do not know with certainty 'whodunit'.

In the devil's cave

Just one year earlier, in the late spring of 1911, a far less-known prank was played out in the rural area of East-Hessen, Germany in the small towns of Steinau and Schlüchtern. Already in 1905 locals had started to explore the so-called Teufelhöhle (devil's cave). The excavations were directed by A. Lüders, a local dignitary responsible for public road works. At the time, he was also the president of the *Verein zur Aufschließung der Teufelhöhle bei Steinau* (Association for the exploration of the devil's cave near Steinau). The motivation of Lüders and his *Verein* to excavate the devil's cave was to create an interesting site given that 'Steinau was off the touristic routes' of the time.²

One of the members of the *Verein* was the apothecary of Steinau, Wilhelm Rappe. Local lore has it that Rappe always enjoyed a good laugh. Judging by his hand-written account of the 'Teufelsstreich im Buchenwald' (A devil's prank in the beech grove) he particularly enjoyed his joke at the expense of Lüders and the *Verein*.³

Rappe skilfully exploited the 'prehistoric fever' that raged through Europe at the turn of the century. In France and Spain spectacular cave paintings had been discovered. In the French Dordogne several fossils of Neanderthals

were unearthed, and in 1907, a mandible of an early human was found in Mauer near Heidelberg (baptized *Homo heidelbergensis*), just over a hundred kilometres away from Steinau.

This Pan-European fossil hunt was ignited and sustained by a broad coverage in both academic publications as well as the mass media. It also explains the excitement of the British media about Piltdown man – finally a discovery of major importance on their own island had been made! At the time, many of the excavators were not professionals not least for the simple reason that the respective disciplines (prehistoric archaeology and paleoanthropology) were only about to be institutionalized.

Rappe's brother had been to Cameroon, at the time a German colony, about two and a half years earlier and had allegedly shot several chimpanzees himself. Rappe took one of the chimpanzee skulls from his brother's collection and started to 'fossilize' it. First he coated the skull in a sugar-mix and held it into the fire in order to blacken it. Then he applied several washes of potassium permanganate to the skull in order to make it look 'thousands of years older'. Finally Rappe planted the skull in the mud surface of the excavation in the devil's cave when the workers were not paying attention. He was looking forward to all the 'conjectures' this might cause. Yet he had not foreseen what was about to happen.

At first the workers did not notice the skull. It ended up in a heap of debris outside the cave. In the process the mandible had gotten lost and part of the nose had been chopped off by a spade. This accident actually helped the prank to gain momentum. The mid-facial part had been thus reduced and hence it was less obvious that the skull belonged to a chimpanzee. After discovering it, the workers handed over the damaged skull to Lüders who immediately informed his fellow members from the *Verein*. With the recent discovery of *Homo heidelbergensis* in the back of their minds they were wondering whether they themselves had just made an extraordinary discovery as well. In order to confirm that the *Verein* needed advice from experts. They took two photos of the skull, a frontal and a side profile and sent them to a number of German scholars. All were invited to come to Steinau and Schlüchtern to have a look at the cave and the skull.

Speculations and scepticism – a spectrum of reactions

The *Verein* did not suffer from false modesty and promptly wrote to one of the best-known German scientists at the time, Ernst Haeckel in Jena. The 'German Darwin', as he was called, was already advanced in age and recovering from an accident at the time. He neither travelled to

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¹ *Illustrated London News* December 28, 1912, 958; quoted after Goulden, Murray. 'Boundary-work and the human-animal binary: Piltdown man, science and the media.' *Public Understanding of Science* 18, no. 3 (2009): 275–91, 284.

² Drevermann, Fritz. 'Die Funde aus der Teufelhöhle in Steinau.' *Verein zur Aufschließung der Teufelhöhle bei Steinau* (1912); similar Drevermann, Fritz. 'Die Steinauer Höhle.' *Natur und Museum. Bericht der Senckenbergischen Naturforschenden Gesellschaft Frankfurt am Main*, no. 45 (1914): 200–214, 202.

³ 'Teufelsstreich im Buchenwald', 1911, papers of Wilhelm Rappe, private archive Hans Rainer Wachsmuth, Spiegelau (Germany).

Steinau nor wrote an expert report but would nonetheless later comment publicly on the find.⁴ While Haeckel was too frail to make the journey, three other scientists jumped at the chance to get their hands on the skull. Rappe's account, a series of newspaper articles, as well as some surviving letters offer us a glimpse of their reactions.

Lüders also informed Fritz Drevermann from the Senckenberg Institute and Museum in Frankfurt, probably in mid-May 1911. The palaeontologist rushed to Schlüchtern (roughly 50 km east of Frankfurt) the same afternoon. Drevermann would later claim that his first impression of the skull was: 'not fossil, far too well preserved and fresh'.⁵ Yet it appears more likely that in those early days of the discovery, Drevermann was not entirely sure what to think of the find. It seems that the members of the Senckenberg Institute – despite their serious doubts about the actual value of the skull – did not want to miss out on a possibly fossil-rich site.

A contract with the Verein was quickly drafted and signed on June 10. According to this agreement, the Senckenberg Institute would take charge of the excavations immediately – and cover the costs as well. The Verein would remain owner of the objects found but they would be stored in Frankfurt. The Institute was granted the right to buy them first.⁶

Soon after Drevermann, on May 21 and 22, two scientists from the University of Göttingen – Friedrich Heiderich and Max Voit – travelled to the cave near Steinau. Heiderich, nowadays a virtually unknown anatomist, took a good look at the skull and told Lüders about his strong doubts about its antiquity. A few days later, Heiderich stated that the skull was 'a very common skull of an ape' and of a recent age in a talk at the 'Anthropologischer Verein' in Göttingen. Heiderich asked himself how the creature might have ended up in the cave: Did he escape from a wandering menagerie and stumble into the hole on top of the cave?⁷

While Heiderich claimed that he had already seen on the photos sent to him that the skull belonged to an ape, the physical anthropologist Hermann Klaatsch was decidedly less sceptical when he scrutinized the very same photos at his office at the university of Breslau (today Wrocław). Full of excitement he responded to Lüders that 'the creature belongs to the group of fossils that link the race of the Neanderthals with the current apes. Maybe it is also a Neanderthal child'.⁸ Klaatsch was one of the most prestigious German anthropologists of his time. He had travelled Australia for several years (1904–1907) and subsequently participated in Neanderthal excavations in France. Nowadays he is credited for contributing to

the establishment of the validity of the species of Neanderthal.⁹

Klaatsch's evolutionary theory changed significantly during his lifetime and it is not easy to sum it up in a few sentences.¹⁰ The most relevant feature in connection with the Steinau case is his idea that the human 'races' had developed out of different species of apes. In other words: Klaatsch proposed a polygenetic theory of human evolution.¹¹ After receiving the photos he hastened to Steinau and Schlüchtern over the Whitsun Holidays in early June. Looking at the skull itself – and possibly influenced by Heiderich's assessment – Klaatsch too concluded that it belonged to an ape and not to an ancestor of Neanderthal, as he had first suspected. Yet unlike Heiderich, Klaatsch considered the skull to be a fossil. Quickly Klaatsch even 'integrated' this new find in a footnote of an article that was about to be published. For him the Steinau skull served as further evidence for the presence of apes in Europe not only in the Miocene but also in the Pliocene. Thus he hoped to bolster his polygenetic theory.¹² In his later account, Rappe claimed that Klaatsch 'was rarely sober in these days' in the Hessian province and would not listen to cautious remarks by Rappe such as 'errare humanum est'.¹³

Rappe might have exaggerated Klaatsch's ecstasy about the discovery. Already on June 11, one day after the Senckenberg Institute had signed the contract with the Verein, Klaatsch wrote to Hans Virchow, the secretary of the 'Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte' (BGAEU), the leading German society for prehistoric research. In order not to interfere with the ongoing research of the Senckenberg Klaatsch announced that he would suspend for the time being further investigations on the Steinau skull. Therefore he also cancelled a talk at the BGAEU on the topic he had already planned. The discovery 'posed some riddles' and Klaatsch wanted to wait for the results of the ongoing excavation.¹⁴

A fourth scientist to get involved was Paul Matschie, the curator of mammals from Berlin's Zoological Museum – and arguably Germany's leading expert on primates. He did not come to Steinau and only judged from the two photos sent to him. Matschie pointed out the similarity to a chimpanzee but suspected that it might be from an extinct Miocene ape: 'I hope that this very important find will get to a museum

⁴ Verein to Haeckel, May 22, 1911, Haeckel-Archive, Ernst-Haeckel-Haus, Jena; Haeckel to Verein, June 17, 1911, quoted after Lüders, 'Der Schädelfund im "Teufelsloch" bei Steinau.' *Schlüchterner Zeitung (Beilage)* 24, 1911.

⁵ Drevermann 1912.

⁶ Archive, Senckenberg Forschungsinstitute und Naturmuseen Frankfurt, file Nr. 201 'Steinauer Höhle', fol. 50.

⁷ Anonymous, 'Der Schädelfund bei Steinau.' *Vossische Zeitung (Königlich privilegierte Berlinische Zeitung von Staats- und gelehrten Sachen)*, June 1, 1911 (morning edition), 4. The *Sitzungsberichte des Anthropologischen Vereins zu Göttingen*, note a communication of Heiderich in the session of May 26, 1911 without explicitly mentioning the Steinau skull.

⁸ Klaatsch to Verein, May 1911, quoted in Verein to Haeckel, May 22, 1911.

⁹ Erckenbrecht, Corinna. *Auf der Suche nach den Ursprüngen: Die Australienreise des Anthropologen und Sammlers Hermann Klaatsch 1904–1907*, Köln: Wienand, 2010; Bowler, Peter J. *Theories of human evolution: a century of debate, 1844–1944*. 2nd ed. Baltimore/London: Johns Hopkins University Press, 1989, 92, 95; Wegner, Dietrich and Klaatsch, Heinz 2003. 'Hermann Klaatsch gegen Rudolf Virchow. Ein Berliner Wissenschaftler verhilft der Neandertalerforschung in Deutschland zum Durchbruch.' *Acta Praehistorica et Archaeologica* 35: 139–155; Wegner, Dietrich and Klaatsch, Heinz 2005. 'Unpublished documents pertaining to Hermann Klaatsch's contribution to the recognition of the Neandertals and to the excavation of the "Homo moustieriensis Hauseri".' in Ullrich, Herbert (ed.), *The Neanderthal Adolescent Le Moustier I*, 41–51. Berlin: Staatliche Museen zu Berlin – Preußischer Kulturbesitz.

¹⁰ Hoffeld, Uwe. *Geschichte der biologischen Anthropologie in Deutschland: von den Anfängen bis in die Nachkriegszeit*. Stuttgart: Franz Steiner, 2005, 108–109.

¹¹ Klaatsch, Hermann. 'Die Stellung des Menschen im Naturganzen.' In *Die Abstammungslehre. Zwölf gemeinverständliche Vorträge über die Deszendenztheorie im Licht der neueren Forschung*, 321–483. Jena: Gustav Fischer, 1911, 480–481; Bowler 1989, 131–146, 197.

¹² Klaatsch 1911, 415, note.

¹³ 'Teufelsstreich im Buchenwald'.

¹⁴ Hermann Klaatsch to Hans Virchow, June 11, 1911, Archive of the Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte (BGAEU), WF, no. 16.

where it will be appreciated **‘accordingly’**, a perhaps not-so-subtle plug for his own museum.¹⁵

Due to misleading information in one of the newspaper articles, readers were led to believe that the **‘Hessian Land-*es*museum’** in Kassel already had taken hold of the skull.¹⁶ Immediately the museum received several requests from anthropologists and the like who wanted **‘to borrow’** the skull for their investigation or at least obtain plaster casts or photographs. This included the anthropologist Gustav Schwalbe from the University of Strasbourg who is today credited with helping to establish Neanderthal as a distinct species in 1901. One can imagine his curiosity after reading about a possible discovery of a Neanderthal ancestor, as the newspaper article suggested. Yet Johannes Boehlau, the director of the museum in Kassel, could only tell them that he did not possess the **‘skull – and that his museum had no intention of buying it either.’**¹⁷

A prehistoric jackpot?

The coming and going of these scientists had caused a bit of a stir in Steinau and Schlüchtern. At the end of May 1911 the ominous skull embarked on a brief career in the German media. Several newspapers as well as popular science magazines reported the discovery from the devil’s cave.¹⁸ In these weeks the meetings of the *Verein* brimmed with **‘anticipation – and speculation’** about how much the skull was worth in monetary terms. According to Rappe the *Verein* received offers of up to 15,000 marks for the skull, an enormous sum for the time.¹⁹ Had they won a prehistoric jackpot?

From the *Verein*, enthusiasm spread quickly to near and far. Local politicians and dignitaries became excited as well. Even a member of the upper house of the Prussian parliament, the aristocrat politician Bogdan Graf Hutten-Czapski came to the Hessian province to retrieve information. Upon his return to Berlin, he reported **‘to the majesties’**, i.e. the members of the family of the German Kaiser about the seemingly spectacular find.²⁰ Rappe amused himself in secret about the talk of this *Pithecanthropus steinoviensis* as he jokingly referred to his prank.

Yet there was of course one little problem. Heiderich did not consider the skull to be old and said so repeatedly in public.²¹ Understandably Lüders very much preferred Klaatsch’s more daring interpretation. The president of the *Verein* contacted several newspapers telling them that the matter had not been decided yet and that the specialists differed among themselves. In a masterpiece of PR,

¹⁵ Lüders 1911.

¹⁶ Anonymous. ‘(Kleine Mitteilungen).’ *Frankfurter Zeitung*, May 30, 1911, 2.

¹⁷ Draft of letter of J. Boehlau to Königliche Regierung, Abt. für Kirchen- und Schulwesen, July 15, 1911; Archive, Abt. Vor- und Frühgeschichte, Museumslandschaft Hessen Kassel.

¹⁸ The first newspaper article I could find that mentioned the discovery of a skull in Steinau appeared on May 25, 1911: Anonymous. ‘Der Schädel Fund bei Steinau.’ *Vossische Zeitung (Königlich privilegierte Berlinische Zeitung von Staats- und gelehrten Sachen)*, morning edition, 27. Also see Umschau, May 27, 1911, 460.

¹⁹ All this according to ‘Teufelsreich im Buchenwald’.

²⁰ Again according to ‘Teufelsreich im Buchenwald’; Hutten-Czapski does not mention this episode in his memoirs which strictly focus on political issues; see Hutten-Czapski, Bogdan von. *Sechzig Jahre Politik und Gesellschaft*. 2 vols., Berlin: Mittler, 1936.

²¹ Anonymous. ‘Der Affenschädel.’ *Berliner Tageblatt*, June 4, 1911 (morning edition), 18; Anonymous. ‘Der Schädel Fund bei Steinau.’ *Vossische Zeitung (Königlich privilegierte Berlinische Zeitung von Staats- und gelehrten Sachen)*, June 7, 1911 (morning edition), 15; *Umschau*, June 10, 1911, 501.

Lüders himself published a large article on 24 June 1911 in which he cunningly rehearsed the different arguments that called into question Heiderich’s **‘judgement’**. He quoted at length from Klaatsch’s expert report that seemed to leave no doubt that the skull was a fossil. A few sentences from Matschie’s letter seemed to confirm this. The zoologist from Berlin pointed out the similarity to a chimpanzee but suspected that it might **‘be Dryopithecus rhenanus’**, i.e. an extinct Miocene ape. What Lüders did not mention (probably because he did not know) was that by that time Matschie had already changed his mind. Already on June 17, 1911 he told his fellow members from the BGAEU in their weekly session that the skull belonged to a chimpanzee from Africa.²²

Even more suggestive were comments Lüders included from a short letter sent to the *Verein* by Ernst Haeckel himself. Haeckel regretted not to be able to write up a report yet did not hesitate to make a strong **‘claim: In any case the skull belongs to a fossil anthropoid and is of high value.’** Lüders topped off the article nicely by quoting the generous offer of Friedrich Ludwig Robert Krantz, a dealer of natural objects from Bonn. Taking on the air of a responsible citizen, Lüders insisted that the *Verein* wanted to wait for a conclusive result from the scientists first.²³ With this very **‘selective – and quite manipulative – presentation’** of the testimonies he had received, Lüders tried to keep the debate on the actual age of the skull open.

Ironically, it was this PR-stunt that would end the **‘hoax – because’** Rappe read the article too. And he did not like the way Heiderich was treated. After all he was the only one who had recognized the skull for what it was. As a reward for his sharp eye, Rappe revealed himself to the Göttingen professor in a letter in early July 1911, congratulating him. Rappe explained that because the *Verein* was close to actually selling the skull, he had felt it necessary to reveal the hoax. The prank had gone much further than he had intended.²⁴ Afraid of possible legal consequences and already in touch with a lawyer, Rappe asked Heiderich not to disclose his identity. On July 21 Heiderich gave his final report to **‘the Anthropologischer Verein’** in Göttingen.²⁵ By early August every German newspaper-reader knew that the mysterious skull belonged to a chimpanzee planted by **‘a jester.’**²⁶ Although Heiderich had not mentioned Rappe’s name, it soon became common knowledge that the apothecary from Steinau had planted the skull.

Minimizing the damage

By the time the hoax was revealed, researchers at the Senckenberg Institute in Frankfurt had already realized that they might have been too hasty in signing the contract with the *Verein*. Otto zur Straßen, the director of the Senckenberg Institute, had discovered two rusty holes that pointed to a contraption to keep the (missing) mandible in place with nails. It looked like a hoax. What were they

²² Matschie, Paul. ‘Über einen Schädelrest aus der Steinauer Höhle bei Schlüchtern.’ *Zeitschrift für Ethnologie* 43 (1911), 582.

²³ Lüders 1911.

²⁴ ‘Teufelsreich im Buchenwald’.

²⁵ Heiderich, Friedrich. ‘(Notiz).’ *Sitzungsberichte des Anthropologischen Vereins zu Göttingen*, July 21, 1911, 21–22.

²⁶ Rappe’s account ‘Teufelsreich im Buchenwald’ includes several newspaper clippings, for example from the *Berliner Tageblatt*.

supposed to do now? The Institute had already started a full-blown excavation of the devil's cave and invested a good bit of money. From the correspondence, it seems that the Senckenberg researchers tried to save face by stressing the scientific importance of the excavation regardless of the skull's authenticity. And in subsequent publications, Drevermann expounded the great value of the hundreds of bones of dogs that turned up (none of them fossil). At the same time he dismissed the ape skull as entirely worthless.²⁷ It is hard not to smile at his anxious efforts to justify the ongoing excavations.

After the exposure of the prank, Matschie mercifully glossed over the fact that he had taken the skull to stem from a Miocene ape. Instead the prolific zoologist from Berlin was at pains to assert his reputation as an expert on primates. He claimed that he could even determine the subspecies of the chimpanzee (*Tschege* or *Kulumba* in his nomenclature) because he had a similar skull in his own collection. In order to prove his claim he even **inquired – mediated** through the Senckenberg **Institute – with** Rappe about the exact geographical provenance of the Steinau specimen (**Lolodorf**).²⁸

The ones who presumably suffered most were Lüders and even more so Klaatsch. Scorn was poured over the anthropologist from Breslau even before the hoax was exposed. On 5 June 1911, an anonymous and scathing letter was sent to the BGAEU. The unknown writer called Klaatsch **a 'charlatan'** and ridiculed him for not being able to distinguish the skull of a human from the one of a chimpanzee. He demanded Klaatsch's expulsion from the BGAEU and suggested that instead Heiderich be made an honorary member.²⁹ After the exposure of the fraud in late July 1911 the *Verein* and Klaatsch wanted to sue Rappe in court, apparently without success. Their vanity had been offended as one journalist remarked. Klaatsch could not escape public ridicule.³⁰ Yet in the long run his reputation did not suffer too much on account of this scandal. The criticisms he received with respect to his polygenetic theory were far harsher.³¹ The Steinau hoax is neither mentioned in his **obituaries – he** died only a few years later, in **1916 – nor** in the (few) scholarly treatments of Klaatsch's work.³²

Epistemological anarchy

Already contemporary observers noted that the case of the chimpanzee skull from Steinau provides a(nother) telling

²⁷ Drevermann, Fritz. 'Einen Schimpansenschädel aus der Höhle von Steinau, Kreis Schlüchtern.' *Zeitschrift der Deutschen Geologischen Gesellschaft* 63 (1911): 463; Drevermann 1914.

²⁸ Museum für Naturkunde Berlin, Historische Bild- und Schriftgutsammlungen; Zool. Mus.; S III, Rappe, W.; fol. 1–2, August 24 and 25, 1911; Virchow, Hans. *Zeitschrift für Ethnologie* 43 (1911), 819. Matschie was a **devoted 'splitter'** – and named numerous new species of apes and monkeys, see Giere, Peter, and Saskia Jancke. 'Professor Georg Friedrich Paul Matschie.' In *Klasse, Ordnung, Art – 200 Jahre Museum für Naturkunde*, ed. Ferdinand Damaschun et al., 196–199. Rangsdorf: Basiliken, 2010.

²⁹ Archive BGAEU, PUB no. 542 v. no 79.

³⁰ Anonymous. 'Der Schädel Fund in der Teufelshöhle von Steinau bei Schlüchtern.' *Staatsbürgerzeitung*, August 2, 1911; Anonymous 1911. 'Un fumiste allemand.' Unknown French paper, August 1911, newspaper clipping, private collection Heinz Klaatsch, Baltimore.

³¹ Keith, Arthur. 'A New Theory of the Descent of Man.' *Nature* 85 (December 15, 1910): 206.

³² There are numerous obituaries, for one in English see Oettking, Bruno. 'Hermann Klaatsch.' *American Anthropologist* 18, no. 3 (1916): 422–425.

example of how easily anthropologists get ahead of themselves if a find seems to support their theoretical claims. Yet as we have seen, the reactions of the scholars involved varied from the enthusiasm of Klaatsch and Haeckel to the scepticism of Drevermann and the outright rejection of Heiderich. Between May and July 1911, there was a brief moment of **'epistemological anarchy'**. Because Lüders and his *Verein* controlled access to the skull, they were in a powerful position to invite anthropologists and anatomists to Schlüchtern and, most significantly, to negotiate with them. The *Verein* had initially promised Heiderich the skull for more thorough investigations but then withdrew this offer because Klaatsch's interpretation seemed **more 'promising'**.³³ Amateurs ruled at least for a brief moment over professionals. Lüders led what we may now call a PR war with Heiderich about the age and hence the value of the skull. The scientific question of how to interpret the discovery was virtually exclusively debated and decided in the public sphere.

Steinau – an inspiration for Piltdown?

It is impossible to say if the Piltdown forger was inspired by planting of the chimpanzee skull in the devil's cave near Steinau. And it is of course entirely conceivable that Charles Dawson – the main suspect in the Piltdown case and by that time already an experienced forger of archaeological **artefacts – came** up with the scheme all by himself.³⁴ Yet the parallels between the two hoaxes are hard to overlook. For starters, there is the chronology. Dawson contacted Woodward in February 1912 to alert him to the hominid fossils he allegedly had found in the gravel pit of Piltdown, merely half a year after the Steinau prank had been exposed.³⁵

Between May and August 1911 the Steinau case was widely reported in the German media but news also reached France and probably also Great Britain. British anatomist Arthur Keith read German fluently and knew Klaatsch's work very well. In the crucial years around 1911/12 Keith reviewed several of his works in *Nature* including the article where Klaatsch mentions the recent discovery of a fossil ape in Steinau.³⁶ Soon Keith would be heavily involved in the investigation of Piltdown man. He differed in his interpretation of *Eoanthropus dawsoni* from Dawson and Woodward but always strongly advocated the authenticity of the Piltdown fossils. Some scholars suspect that Keith might have been Dawson's **'scientist-accomplice'**.³⁷

Both forgers treated the bones chemically to make them look substantially older. One may say that the Piltdown **forger 'refined'** Rappe's method, not using the skull of an ape but actually combining remains of man and orangutan. The Piltdown forger **also 'improved on'** the Steinau

³³ Heiderich to Rappe, July 13, 1911, quoted in 'Teufelsstreich im Buchenwald.'

³⁴ Russell, Miles. *Piltdown Man: The Secret Life of Charles Dawson & the World's Greatest Archaeological Hoax*. Stroud, Gloucestershire: Tempus Publishing, 2003.

³⁵ Russell 2003, 149.

³⁶ Keith 1912. 'Review of: Die Abstammungslehre: Zwölf gemeinverständliche Vorträge über die Deszendenztheorie im Licht der neueren Forschung.' *Nature* 89 (March 7, 1912): 4.

³⁷ Spencer, Frank. *Piltdown: a scientific forgery; based on research by Ian Langham (1942 – 1984)*. London [u.a.]: Oxford University Press, 1990; Tobias, Phillip V. 'Piltdown: An appraisal of the case against Sir Arthur Keith.' *Current Anthropology* 33, no. 3 (1992): 243–293.

489 skull (damaged, but in one piece) by smashing the skull
490 into numerous pieces. This allowed for more discussion,
491 different reconstructions and thus more credibility.

492 Both pranks were born out of the prehistoric fever of the
493 early-twentieth century. Yet while the Steinau case only
494 flourished for a few months and remains a forgotten episode
495 in the history of paleoanthropology, Piltdown man misled
496 the community of human-origins researchers for decades.
497 The skull of the chimpanzee from Cameroon that was
498 planted in the devil's cave and then went through the hands
499 of distinguished members of the German anthropological
500 community ended up in the collection of the Senckenberg

Institute in Frankfurt. Whether it has been discarded as
valueless or still lingers in the vaults of the museum is not
known. The *Verein* in a sense achieved its goal. With the
support of the Senckenberg the cave was fully excavated. No
interesting fossils were found but the devil's cave is today
known as Germany's smallest stalactite cave and has be-
come a minor tourist attraction.

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