

Research Article

‘An Essay on the Prehistoric Chronology of the British Isles’: an unpublished essay by Vere Gordon Childe. Disciplinary debates, changing chronological paradigms and the ‘Radiocarbon Revolution’

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'An Essay on the Prehistoric Chronology of the British Isles': an unpublished essay by Vere Gordon Childe. Disciplinary debates, changing chronological paradigms and the 'Radiocarbon Revolution'

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Abstract

This article provides critical context for a previously unpublished essay by Vere Gordon Childe. The essay reimagines prehistoric chronologies of the British Isles as soil sediments in 'glass tubes'. Its creativity and subject matter emphasise that Childe's later work did not focus wholly on Marxism; he also critically revisited themes that had interested him throughout his career, here prehistoric dates and chronologies. Key aspects and examples explored in the essay are found in Childe's other contemporary writings, emphasising their importance in his thinking. The essay is a playful but nonetheless devastating critique of chronological problems that Childe shared for discussion with his friend and intellectual ally, Christopher Hawkes. Perhaps originally a lecture, it formed part of wider disciplinary debates on establishing standard frameworks and paradigms for prehistoric chronologies that took place in 1950–1. These debates represent a transitional moment, when prehistory became self-aware, reaching disciplinary maturity. This moment was a false start, because the debates were soon swept away by an even more fundamental transition, the transformative irruption of radiocarbon dating. Radiocarbon is often framed as driving Childe's version of European prehistory into obsolescence, but new evidence linked to the essay and the debates indicates that he fully supported its development and embraced the changes it brought.

Keywords: Gordon Childe, Frederick Zeuner, Christopher Hawkes, prehistoric chronologies, European prehistory, archaeology, radiocarbon, scientific dating techniques

Introduction

This article introduces a hitherto unpublished essay by Vere Gordon Childe (1892–1957) preserved in the archive of prehistorian Charles Frances Christopher Hawkes (1905–92)

in the Bodleian Library, University of Oxford. Given the title, 'An Essay on the Prehistoric Chronology of the British Isles', it is reproduced here at the end of the article as an uncorrected transcript (Appendix 1).

Hitherto unknown works offer exciting possibilities for enhancing and refashioning ideas about pioneering archaeologists and the development of the discipline. This essay offers new insights not only into Childe's own research, but also into contemporary developments and debates in archaeology. In 1951, a group of British archaeologists proposed rival models to reconcile increasingly sophisticated ideas about prehistory with outdated terminologies and problematic chronologies. This essay was part of these efforts. Childe had long played a leading role in the formation of prehistoric chronologies for Britain and Europe and was a fierce advocate for the development of temporal methodologies. The models proposed were soon swept away by radiocarbon dating. Nonetheless, they should be recognised as a 'key threshold' in prehistory's disciplinary transition from consciousness to self-consciousness (Clarke 1973, 6).

Advances in radiocarbon dating are often framed as marking the end of Childe's dominance over European prehistory, a process he reputedly feared (Trigger 1980, 165). But such perspectives deny Childe's role as an active agent in the promotion of scientific dating and play down his powers of creative reinvention. It is into the context of Childe's advocacy for accurate chronologies that we should place not only this essay, but also his support for Frederick Zeuner (1905–63), Professor of Environmental Archaeology at the Institute of Archaeology, and a pioneer in radiocarbon dating.

The essay provides micro-historical insight into one aspect of Childe's long archaeological career: the influence that he wielded over prehistoric chronologies. Along with other new sources of evidence, particularly correspondence, it also allows us to revisit and challenge long-held perspectives about his later work. It indicates that he was not only disassociating himself from antiquated dating techniques and revising diffusionist approaches, but also adapting to and anticipating the changes that the new dates were bringing (for example, Childe 1957; 1958a). Childe was neither afraid of, nor left behind by, the 'Radiocarbon Revolution'; rather, he fully participated in it.

The essay: description, content and format

Preserved in the Bodleian Library, the essay consists of a six-page typed manuscript, with corrections of minor errors by hand (see Figure 1). Date, context and title have been added to the typescript in pen in Christopher Hawkes's characteristic, bold classical handwriting:

Carbon copy of an Essay on the Prehistoric Chronology of the British Isles by V. G. Childe handed to me by him on the evening of Dec 21st 1951 in the Athenaeum Annexe, where Jacquetta and I were his guests for dinner. When I said that I presumed it would be published somewhere, he replied, 'of course not!' C. F. C. Hawkes.

Hawkes also added a note at the end, 'written presumably in mid-December 1951'. These annotations were retrospective, made in later life when Hawkes was contemplating a possible autobiography, and we are entirely dependent on his recall for details (Diaz

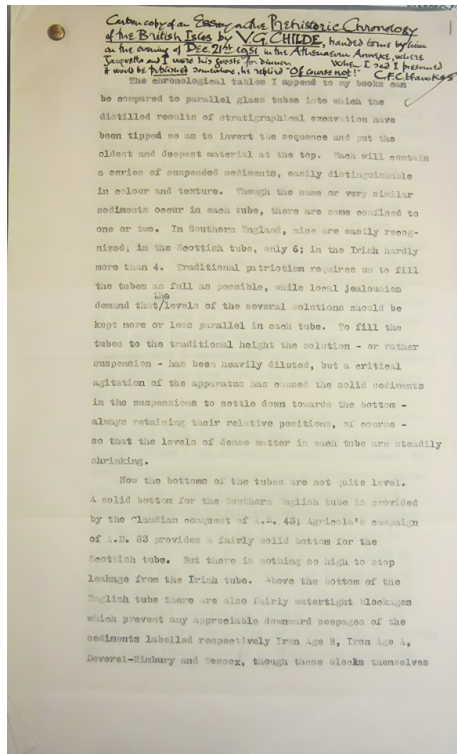


Figure 1 Page 1, typescript of ‘An Essay on the Prehistoric Chronology of the British Isles’, Childe 1951 (Source: MS. 21042/8, Archive of C. F. C. Hawkes, Bodleian Library, University of Oxford. Reproduced with permission of the Bodleian Libraries © UCL)

Andreu et al. 2009, 412). The original typescript was untitled, and the written title was perhaps the creation of Hawkes rather than Childe.

Vere Gordon Childe was one of the most influential prehistorians of the twentieth century. An Australian by birth, he was Abercromby Professor of Archaeology at Edinburgh University from 1927 to 1946 and Director of the London University Institute of Archaeology between 1946 and 1956. Childe combined his primary field of research, European prehistory, with a pioneering interest in archaeological theory (Green 1981; Trigger 1980). An original handlist of his publications was compiled during his lifetime and successive discoveries were later amalgamated into a ‘definitive’ list (Gathercole et al. 2009; Smith 1956). However, unknown manuscripts do emerge. For example, the typescript of a book chapter, ‘The Minoan influence on the Danubian Bronze Age’ (Childe 1927) was found by the author of this article among UCL Institute of Archaeology Library pamphlets in 2022.¹

An entirely unknown Childe manuscript, *Bronzezeitliche Kulturgruppen der ungarischen Tiefebene und ihre zeitliche Gliederung* (‘Bronze Age cultural groups: the Hungarian plain and their temporal outline’), was given to János Makkay in 1958. The manuscript probably came from the estates of archaeologists Ferenc Tompa (1893–1945) or András Alföldi (1895–1981), both friends of Childe, and was possibly a lecture for the cancelled International Congress for Prehistoric and Protohistoric Sciences, planned for

Hungary in 1940 (Makkay 1991, 137, 145). Like the essay, it was apparently exchanged with friends for discussion, revealing how important dialogue was to Childe for developing his ideas and underscoring how social practices and networks helped develop the discipline.

Although Childe is particularly known in his later career for his Marxist interpretations, the essay fits well into his contemporary work, especially his sustained commitment to European and British prehistory (Childe 1957; Gathercole et al. 2009; Harris 2009, 124). The essay relies heavily on *Prehistoric Communities of the British Isles* (Childe 1940a), a seminal work based on a series of Munro lectures, which Childe delivered annually in Scotland (Childe 1940b). Childe (1940a, 213–16) knew that elements of *Prehistoric Communities* were already out of date; for example, the Abernethy ‘culture’, formerly identified as evidence of ‘La Tene invasions’ of Scotland around 200 BC, he now dated in the essay to around 50 BC. The essay therefore serves partly as a ‘current state of awareness’ for British prehistory in the early 1950s. It also showcases Childe’s unrivalled knowledge networks, his unabated versatility in synthesising data and his encyclopaedic recall of specific artefacts, comparing for example ‘the bone girdle clasp (or dagger suspender) from the urnfield at Brackmont Mill’ (Scotland) with the ‘gold one from Normanton’ (Bush Barrow, Wiltshire).

The essay’s unusual theme, chronological tables for the British Isles reimaged as ‘parallel glass tubes into which the distilled results of stratigraphical excavation have been tipped’, emphasises that Childe’s later innovation of thought was not wholly expended on Marxist themes in archaeology. Childe frequently expressed frustration with relative and historically derived dating (see, for example, Childe 1944a; 1948). Here his reimaging of British prehistoric chronologies as a soil sedimentation experiment offers a powerful visual critique. The essay implies not only that paradigms based on relative dating were subjective and unfit for purpose, but that traditional structures of prehistory, both chronological and epistemological, were also now inherently unstable.

Shortcomings are ruthlessly revealed. Historical dates from Roman Britain, key for dating British prehistory, are useless for Ireland; there were none available ‘to stop leakage from the Irish tube’. ‘The blocks’ (dates and periods) had been ‘slipping down appreciably’, changing as archaeological knowledge increased. Childe felt confident only about the ‘Wessex stopper’ (referring to the Bronze Age ‘Wessex Culture’) of ‘around 1350 BC’, but the boundaries within Hawkes’s (1931) ABC system, which divided the British Iron Age into three periods, had ‘sunk’. Irish chronologies were most problematic; some of Ireland’s tombs might date to the Iron Age: ‘the most reliable evidence for dating a sculptured Boyne tomb are the bone plaques with La Tene engravings.’ Overall, dating prehistoric Ireland was so difficult that Childe, a life-long advocate for ‘scientific’ archaeology, dramatically did the unexpected, and suggested filling the Irish ‘archaeological vacuum’ with the poetic record: ‘should we not after all accommodate some of these in raths like Cush and allow the nobles of Ulster to reclaim the tombs of Siabh-na-Caillighe and Brugh-na-Boinne which the Leabhar na h’Uidhre implicitly attributed to them.’ Chronologies were so unreliable, even stories would do. The essay ends abruptly with a warning rather than a conclusion. The consequences of letting the Irish evidence ‘slide’ were severe; the whole chronological edifice of the British Isles would collapse on itself.

The essay in its wider disciplinary and community context: networks and lectures

The entertaining drama, casual language and lack of a clear conclusion suggest that the essay may have been adapted from an earlier lecture. The untidy, experimental and unfinished 'feel' supports Hawkes's reminiscence that it was not intended for publication. The analogy of the glass tubes, although visually innovative, is difficult for audiences unfamiliar with sedimentation experiments and soil strata to follow. The arguments are dense, requiring a strong understanding of prehistoric chronologies, excavation stratigraphy and artefacts, particularly the unique artefacts that Childe would have considered 'type fossils'; for example the 'cauldron from Llyn Fawr', which he used for relative dating: 'associated with an Early Hallstatt sword (which in Central Europe was superseded about 550 BC)'.

Hints of an original lecture, and that Childe used the metaphor of glass tubes for chronological tables more generally, occur in another shorter, undated version of the essay, which leaves out much of the Irish discussion (Figure 2).² Lectures, then as now, were vital for academic practice. They were also vital for disseminating ideas to learned societies and ensuring public cooperation in preserving Britain's archaeology. Many of Childe's academic lectures were published, including the L. T. Hobhouse Memorial Trust Lecture (Childe 1949) and the Frazer Lecture (Childe 1950b). Fewer of his public lectures made it into print. Nonetheless, he used them as dialectics to engage and challenge audiences, as in the case of his controversial Marxist Rhind Lectures, delivered in 1944 (Childe 1946a; Gathercole et al. 2009).

Post-war, Childe was recognised as the leading prehistorian in Europe. The University of London Institute of Archaeology became a centre for European prehistory, attracting visiting scholars and guest lecturers (Harris 2009, 124–5). Childe established a network of talented young prehistorians, including Jay Jordan Butler (1921–2014), Humphrey Case (1918–2009), Isobel Smith (1912–2005) and Nancy Sandars (1914–2015) (Burgess 2004, 347–9; Harris 2009, 134). Students were encouraged by Childe to study British prehistory within its European context (Steegstra 2018, 82, 140).

In the winter term of 1950, Childe (1951a, 2) set up a course of public lectures titled 'Recent Work in European Prehistory', which included lectures by Glyn Daniel (1914–86), Frederick Zeuner, Nancy Sandars and himself. The essay may have originally been Childe's lecture for this series. Its innovative style certainly fits into the relaxed and fun nature of Institute lectures (Sandars 1999, 11). Childe was a poor public speaker, but he had a keen sense of theatre: he once lectured at the Institute while draped in a white sheet, 'doing a public penance for some statement he had made' (Green 1981, 62, 110–11; Talbot 1987, 28). The lectures, broad in scope and 'not confined to recent discoveries' (Childe 1950a), became the seedbed for debates about the need for an 'objective system' of chronologies and terminologies, uniting and spurring individuals frustrated by the limitations of current chronologies into action (Daniel 1951a).

Childe belonged to the 'Golden Generation', a close-knit group of archaeologists that emerged between the wars. For them, archaeology was not a 'hobby', but a skilled profession. They established common ground rules, epistemological values and disciplinary boundaries. They took control of key organisations and dominated scholarly

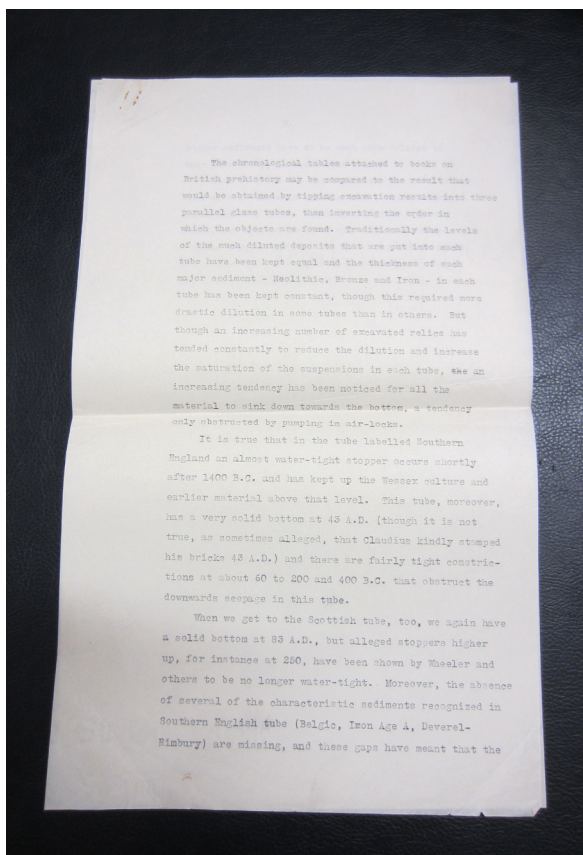


Figure 2 Alternative shorter version of the essay. Date unknown. Gordon Childe Archive, Childe Correspondence 1/1–48 (Source: UCL Special Collections © UCL Institute of Archaeology)

communication (Stout 2008, 19–20, 38–9). The essay is a product of this network. But it is also the product of post-war complexities. The ‘Golden Generation’ was neither monolithic nor static; post-war, unity began to dissolve as personal relationships faltered, academic interests diverged and rivalries between university departments emerged. Childe, for example, became interested in social and technological issues, while Grahame Clark (1907–95) focused on the economic and social aspects of prehistory (Diaz Andreu 2012, 29–30; Smith 1996). New alliances also emerged. The essay was the product of one such alliance; members disparate in age, position and university affiliation united in attempts to break the chronological deadlock.

The post-war boom in archaeological work was problematic. ‘The great threat to archaeology in its present phase’ was ‘suffocation by material too bulky to control’ (Hawkes 1955). Older, more simplistic concepts no longer served. Thomsen’s Three Age system of Stone–Bronze–Iron, developed in the nineteenth century, had long been perceived as out of date. Cultures and chronological phases were too varied, too local, too subjective and too prone to geopolitical influence (Harding 2020, 341). As Childe stated in the essay: ‘traditional patriotism requires us to fill the tubes as full as possible, while local jealousies demand that the levels of the several solutions should be kept more or less parallel in each tube.’

The frustrations, rivalries, anxieties and desire for reform visible in post-war correspondence and writings indicate that archaeology had reached disciplinary maturity, moving from consciousness to self-consciousness, reshaping itself (Clarke 1973, 6). However, these developments were not incidental, but also reflections of wider society. Britain was threadbare, bombed out and exhausted. But there was also hope and ambition for a better future. It is perhaps no surprise that the essay and discussions occurred in 1951, the year of the Festival of Britain, hailed as a 'beacon of change' for the country (Atkinson 2012; J. Hawkes 1951).

Christopher Hawkes and Gordon Childe: an archive and a friendship

While the essay may have been the product of currents of thought circulating at the Institute of Archaeology, it also needs to be placed within the context of Childe's friendship with Christopher Hawkes. It was this connection that broadened the discourse on chronologies out into the wider prehistoric community.

Sixteen 'Childe' documents, mainly correspondence, are held in the Hawkes archive. The archive, donated to the Bodleian Library after his death, is a vast collection of correspondence, documents, publications, notebooks, offprints and typescripts. The materials date from the 1920s to the 1980s, but predominantly to after Hawkes's appointment as Professor of Archaeology at Oxford in 1946 (Diaz Andreu et al. 2009). Six Childe documents are undated, but the remainder range in date from 1939 to 1955. Five further letters, dating from 1932, 1937 and 1945, are preserved in the British Museum central archive. Two letters from Hawkes to Childe, dating from 1939 and 1955, are in the UCL Institute of Archaeology archives.³

Hawkes first became interested in archaeology while studying Classics at New College, University of Oxford. Reading *The Dawn of Civilization* (Childe 1925) in 1926, 'set him on the path of prehistory' (Webster 1991, 188). In September 1928, he joined the British Museum as an Assistant Keeper, remaining there for 20 years. Hawkes gained a reputation as both a field archaeologist and an expert in Iron Age studies. In an early seminal paper, he divided the British Iron Age into the so-called 'ABC system', which became the accepted chronological framework for the next 30 years (Harding 1994, 326–8; Hawkes 1931; 1982, 95). His book, *The Prehistoric Foundations of Europe to the Mycenaean Age* (Hawkes 1940), competed with Childe's *Dawn of Civilization*, but never matched its success (Diaz Andreu et al. 2009, 408). In 1946, Hawkes was appointed as the first Professor of European Archaeology at the University of Oxford and in 1961, founded the Oxford Institute of Archaeology (Diaz Andreu et al. 2009, 407).

Although Hawkes (1982, 95–6) initially met Childe through the British Museum, their friendship developed when both men were chosen as permanent national secretaries to the International Congress for Prehistoric and Protohistoric Sciences, which met in 1932 (Harding 1994, 236). They worked well together; one letter from Childe (1931) to Congress President John L. Myres (1869–1954) reports that he is contacting overseas colleagues as Hawkes was 'engaged in a dig without possibilities of dealing with such matters'. As war approached, both men were united in their opposition to the influence of Nazism on European archaeology (Meheux 2023, 403). Post-war, Hawkes

joined the Management Committee of the Institute, which advised Childe as Director (Harris 2009, 124–5).

Childe and Hawkes enjoyed a close academic friendship, sharing an all-consuming dedication to archaeology (Diaz Andreu 2012, 91, 145; N. Hawkes 2002, 315). Five letters from Childe to Hawkes's wife, Jacquetta (1910–96), herself a talented prehistorian, dating from 1934–51, show that they too enjoyed a warm friendship until the Hawkeses' divorce in 1953.⁴ Hawkes (1941; 1949) and Childe (1940c, 1946b) reviewed each other's work. They also worked collaboratively, for example, on two consecutive papers on European prehistory for the Prehistoric Society's 1948 Conference (Childe 1948; Hawkes 1948). They exchanged students; Sandars studied with Hawkes at Oxford after completing her diploma at the Institute (Hughes-Brook 2020, 112).

Both men were reserved workaholic intellectuals (Green 1981; N. Hawkes 2002, 315). Both built extensive networks of contacts and friendships with European archaeologists (Diaz Andreu 2012, 119–48; N. Hawkes 2002, 315). They knew each other's work and ideas and shared a keen interest in the problems of prehistoric chronologies. Hawkes's ABC system was followed widely post-war, but Childe (1940d) was never entirely convinced: 'it makes me feel at first if most of A is really B, and B in fact is often C and lots of C is quite AD. Then where in hell are we?' Hawkes (1941, 38), in turn, claimed that Childe 'oversimplifies' chronologies. Both men were uneasy about how British prehistory fitted with Continental evidence; they discussed, for example, their reservations about the idea of a Late Bronze Age 'colonization' of Britain by 'urnfield folk' from the Continent (Childe n.d.).

In September 1951, the annual Meeting of the Prehistory Society took place in Dublin. Both Hawkes and Childe played prominent roles; Hawkes was President of the Society, and Childe (1951c), a long-term member of the Royal Irish Academy, led discussions and gave his own lecture. Hawkes used his presidential address to take a critical look at areas in which British prehistory could improve. He saved his most swingeing criticism for the failure of 'prehistoric nomenclature, both chronological and in terms of diffusion'. Mindful of the diversity of his audience, Hawkes pointed out that the lack of standard terminologies affected not only the discipline, but also public education. He emphasised that he was not alone in this criticism; a group of 'philanthropic plotters' (that is, those associated with the lectures at the Institute of Archaeology) were already working to establish 'some new and more appropriate general terminology' to replace 'the old and outgrown formularies'. He encouraged others to put forward their own proposals for 'chronological ready reference' and ended his speech in the optimistic hope of a root-and-branch re-drawing of prehistory: 'the scheme of time-reference, the names of cultures, the grading of technological stages – all these things will presently emerge in neat and sound simplicity' (Hawkes 1951, 11).

Hawkes's (1951) own innovative and original proposal involved replacing relative systems with blocks or units of time that reflected the chronological distance from history (Evans 1998, 398). He disliked defining chronology with complex culture-stages and proposed a simple four-fold division that would bring British terminologies and concepts of prehistory more into line with Continental practices: Protohistoric (300–500 BC); Parahistoric (1500–300 BC); Telehistoric (early Metal Ages and secondary Neolithic); and Antehistoric (primary Neolithic, Mesolithic and Palaeolithic). Hawkes (1954) would return to these ideas again in his much-debated concept of the 'ladder of inference' (Evans 1998).

The lecture in context: new paradigms and chronologies

Evans (1998, 390) has described Hawkes's speech as a moment when archaeology became 'aware of its own project', but the process was more collective, drawn out and nuanced. Private discussions to formulate a new dating framework began during the Institute lecture series in 1950, led by Glyn Daniel, Lecturer at the University of Cambridge (Hawkes 1951, 10). His long-standing scepticism about relative dating coalesced around his lecture; he found it 'impossible to talk about French megaliths without some such objective system' (Daniel 1951b).

Letters between Daniel and Sandars reveal the ambitious plans of the 'philanthropic plotters'. Childe proposed 'horizons of three hundred years or so' for the new framework. Hawkes was putting together the scheme that he presented in Dublin. He wanted 'generations of thirty years', which Daniel considered 'too small'. Hawkes rejected the word 'period' because 'it stinks of Montelius, Reinecke, also Childe: he would prefer "unit 6" or "unit 7"'. Daniel considered all ideas. He investigated 'a way of referring to points of time within his [Hawkes's] telehistoric period of 3000 to 1500 BC' but wanted the cut-off point for historical dating to be 3000 BC, 'the first date we shall ever be able to get based on human chronology' (Daniel 1951a). Earlier dates should be derived from 'geochronological techniques', an idea finding acceptance among scientific innovators (Childe 1944a, 19; Daniel 1951a; Zeuner 1950, 81).

Daniel (1951b, 37), a talented publicist, put his ideas out first in the March 1951 issue of *Man*, the journal of the Royal Anthropological Institute, to 'invite attack' and start discussion in advance of Hawkes's speech. He pointed out the central weaknesses of the Three Age system, notably that chronological periods were merely typological and cultural divisions of materials, applied with such variability that segmented faience beads found in Wessex, France and Spain dated to around 1350–1000 BC, could be described as Early Bronze Age II, Middle Bronze Age, Middle Bronze Age I, Bronze III or Mediterranean Bronze I (Daniel 1951b, 35–6). Since dating in calendar years 'looked unlikely', the priority was to create a framework of 'general reference' with chronological periods that did not change when cultures and artefacts changed their relative and absolute dates; Childe's European Period II, for example, had changed from 2600–2300 BC to 2200–2000 BC in between editions of the *Dawn of European Civilisation* (Daniel 1951b, 36).

The framework that Daniel proposed was neither original nor personal to him. Instead, it was derivative and reliant on Childe's work. He proposed combining the system created in *The Dawn of European Civilisation* (Childe 1947, 330–6) and refined in *The Danube in Prehistory* (Childe 1929, 414–18) with the system outlined in *Prehistoric Communities of the British Isles* (Childe 1940a, 11). This divided British prehistory into nine periods, labelled I to IX, which Daniel maintained was 'one of the most important advances ever made in the methodology of British prehistoric archaeology'. Childe's three systems together represented 'the germ of as great a change in prehistoric methodology as the three-age system' (Daniel 1951b, 35).

In a letter to *Man*, in May 1951, Childe replied. But although he was flattered by Daniel's proposed framework, he did not support it (Childe 1951b, 70). He rejected the idea that archaeological periods could serve as accurate divisions of abstract time, because they were divisions of archaeological material 'seriated' in 'vertically superimposed strata

that archaeologists then transpose into a “fourth dimension” – temporal successions’ (Childe 1951b, 71). Childe (1944b, 7; 1946d, 18) wanted to retain the Three Age system because the periods were useful for marking relative positions in the ‘homotaxial’ sequence of technological development, a term he adopted from geologist Thomas Huxley (1825–95) and interpreted as meaning that distinct assemblages of tools follow one another stratigraphically in the same order wherever they occur, but not necessarily at the same time. He also pointed out that there were multiple problems in using local relative chronologies as divisions of a wider time frame. The unique artefacts, or ‘type-fossils’, used to create phases and cultures were not universal but determined by social traditions. Not all societies within a ‘cultural province’ were at the same stage. Cultures should only designate divisions of a local sequence, although the exchange of ‘type-fossils’ or imitations in spatially adjacent or inter-related provinces made it possible to correlate the divisions to fit local sequences within a wider frame. He emphasised the need to avoid giving a false impression of the ‘incompleteness’ of the chronological sequence or that periods were equal divisions of abstract time (Childe 1951b, 71).

Although it is unclear whether Childe wrote his letter to *Man* before or after he produced the essay reproduced here, the links are clear. In the essay, Childe envisages British chronologies as the results of ‘stratigraphical excavation’, a series of strata inverted and vertically superimposed. In the letter, he referred, as in the essay, to the Deverel-Rimbury ‘culture’ and Hawkes’s ABC dating system for the Iron Age. He alluded to the problems of linking evidence from Scotland with southern England (Childe 1951b, 71). He also demonstrated the difficulties of tying together local chronologies into a coherent system for the British Isles and the dangers occurring when societies within a ‘cultural province’ were ‘not at the same stage’ (Childe 1951b, 71). This was his primary concern in the essay on the Bronze Age evidence from Ireland, not least because the apparent discrepancies endangered the wider chronological framework of the British Isles. The concept of chronologies or phases as vertical strata was central to Childe’s (1946d, 18) new way of thinking about cultures and classifications as ‘four dimensional’. Representing cultural strata as soil sediments in the essay was perhaps a natural development of this way of thinking, but technological stages and human activity more generally are not geology; the typo-chronology of objects is complex and variable. In the essay, Childe struggled to make his neat geological approach work for the Irish material, noting, for example, ‘at Lough Gur no clear ceramic change separates the layers containing Late Bronze Age razors, etc., from the mixed Beaker-Secondary Neolithic levels lower down.’

Daniel’s proposals needed Childe’s support for their acceptance within the prehistoric community. Childe had not only produced the standard chronological frameworks for Europe but had also long been a fierce advocate for reform. For Childe (1935, 1–2; 1944a, 18), the basis of archaeology was the need for a strong chronology; ‘a true historical order and temporal sequence’. Childe’s (1948) brilliant recall of artefacts allowed him to build, change, critique and dismantle complex typological systems and until the ‘Radiocarbon Revolution’, his chronologies were almost universally accepted by British and European prehistorians (Burkitt and Childe 1932; Renfrew 1999, 42–8, 50–1; Sherratt 1989, 181) (see Figure 3). Childe recognised that chronological interpretations were always provisional and mutable (Gathercole 1989, 28). He vacillated, with cynical self-awareness, between long and short chronologies (Trigger 1980, 47), writing to anthropologist

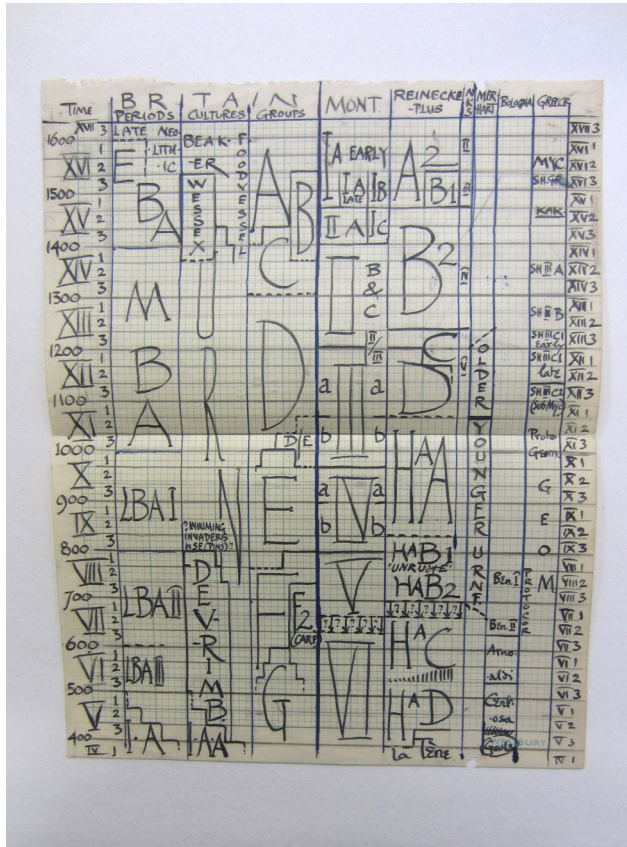


Figure 3 Prehistoric chronological tables hand-drawn by Gordon Childe. Gordon Childe Archive, Childe Correspondence 1/1–48 (Source: UCL Special Collections © UCL Institute of Archaeology)

Carleton Coon (1904–81): ‘I cannot remember what my revised chronology was when I wrote to you; I revise it every month – alternatively long and short’ (Childe 1937). In 1938, Childe established two chronological schemes for Europe, one of which anticipated by three decades the dating frameworks established by radiocarbon. Ironically, he rejected it on the grounds of a time lag between European cultures and the Near East (Childe 1938; Sherratt 1989, 181). Knowledge, experience and cynicism meant that, unlike Daniel, Childe (1944a; 1948) rejected the idea of a standard relative dating framework. His solution was to look outside archaeology for an absolute chronology derived from science; ‘climatological designations, the movement of glaciers, solar years or radio-carbon dating’ (Childe 1951b, 71).

Letters were despatched to *Man* throughout the year by individuals anxious to keep the debate going, but no further models were proposed. Stuart Piggott (1910–96), Abercromby Professor at Edinburgh University, admitted that archaeologists frequently hedged or admitted defeat over dates. His chief criticism of Daniel’s ideas was their Eurocentrism. He proposed standard correlation of Near Eastern and European chronologies; the historical records of the Near East and Egypt provided the only fixed dates then available (Piggott 1951; Renfrew 1999, 27). Sandars decried the ‘anarchy of prehistoric nomenclature’ and

like Hawkes, emphasised the need to create a prehistoric framework that linked to historic chronologies in ‘a painless and progressive transition’. She also wanted to free ‘temporal periods from cultural associations’ (Sandars 1951). T. G. E. (Terence) Powell (1916–75), Rankin Lecturer in Prehistoric Archaeology at the University of Liverpool and a friend of Piggott, Daniel and Sandars, was concerned, like Childe, that any system developed must be suitable for ‘the non-scholar’. He also warned about creating new systems in constant need of alternation (Powell 1951).

Despite the efforts of the ‘philanthropic plotters’, the ideas came to nothing. Although Hawkes had pushed debates into the wider community, there are no signs of widespread engagement, nor that anyone else accepted his challenge to create their own chronology. Neither the *Proceedings of the Prehistoric Society* nor *Antiquity*, the two leading journals for the wider archaeological community, picked up on the debate. The essay, handed to Hawkes at the end of the year, may have been an attempt to keep debates going, at least within the academic community and among the ‘plotters’. Despite this failure, the group remained close, rooted in strong personal relationships (Hughes-Brock 2020). After Childe’s death, Hawkes gained an overwhelming influence on Bronze Age and Iron Age studies, particularly chronologies, that endured throughout the 1960s and 1970s, until challenged by a new generation of prehistorians (Burgess 2004, 349; Harding 1994, 335). His chronological paradigm was never adopted. Although original and innovative, it was highly abstract and demanded a total break from decades of established archaeological practice and the work of colleagues elsewhere in Europe and the Near East. The Three Age system, as Childe (1946d, 18) recognised, for all its failings, was still one of the most effective ways of modelling technological and cultural, if not temporal, change: ‘easily recognisable, with unambiguous criteria’. Evans (1998, 398) has described Hawkes as ‘less well known than Childe and overshadowed by him’, but in many ways, he was Childe’s intellectual heir, continuing investigations into chronologies and championing scientific approaches in archaeology (Harding 1994, 330).

Chronological and terminological problems remained throughout the 1950s. Attempts were made to produce alternatives or circumvent uncertainties, notably by Richard J. C. Atkinson (1920–94). Atkinson’s (1956) study *Stonehenge* was written entirely without reference to the Three Age system (Burgess 2004, 341). However, there was progress. In 1956, Childe’s students, Butler and Smith, produced a revolutionary article for studies of the British Bronze Age (see Figure 4). They laid out the factors necessary for understanding the period still relevant today: familiarity with metalwork, comparison with Continental material and doing away with the false concept of ‘time-lag’ (Burgess 2004, 346; Butler and Smith 1956; Steegstra 2018, 145).

Debates on chronology reveal the leadership role that Childe played in the prehistoric community, specifically in the formation of prehistoric chronologies and archaeological theory. This seems in marked contrast to Piggott’s (1958) post-mortem portrayal of Childe as an establishment ‘Outsider’. None of Childe’s fellow plotters could match him for originality and breadth of perspective. Daniel started the debate, but he produced nothing original, relying on Childe’s systems for his proposed framework. Hawkes’s concepts were innovative, but unable to articulate the link between culture, technology and chronology that Childe modelled so successfully throughout his career.

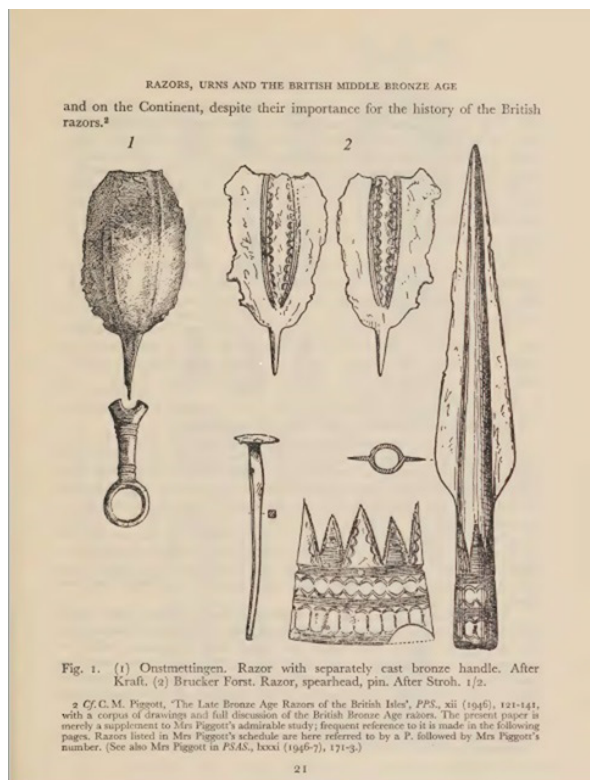


Figure 4 Illustration from Butler, J. J. and Smith, I. F. 1956. 'Razors, urns and the British Middle Bronze Age', *Annual Report of the Institute of Archaeology* 12: 20-52 (Source: Open access: https://ucl.primo.exlibrisgroup.com/discovery/collectionDiscovery?vid=44UCL_INST:UCL_VU2&collectionId=81387932940004761)

It was Childe, one of the most self-reflective and theoretically innovative of twentieth-century archaeologists, who dominated the critical turn to disciplinary self-consciousness represented by debates over chronologies, but he also arguably suppressed it, by refusing to further support exploratory paradigms and entertain the possibility of standard frameworks for the whole discipline.

Bon (2018, 83) has described prehistoric chronologies as the 'intellectual Frankenstein that animates prehistoric narratives' and suggests that attendant difficulties are about getting the different narrative forms of archaeology to harmonise. Childe similarly recognised the tension at the heart of prehistoric archaeology: roots on the one hand in the natural sciences – geography, ethnography and geology – and on the other in the classificatory approach inspired by antiquarianism. He commented, 'hence within prehistory archaeology we find differences of method and apparently even of aim' (Childe 1943, 20-1). As the debates about formulating a standard chronology ended, a new clash was developing, between the scientific approaches promoted by Childe, Zeuner and Clark, derived from the natural sciences, and the descriptive, scholarly approaches derived from the historical sciences then championed by Hawkes, Daniel and Sandars.

Finding new paths for prehistoric chronologies: Childe, Frederick Zeuner and radiocarbon dating

Looking back at the events of 1950–1, Daniel (1986, 346) recalled that his proposed framework was simply ‘found not to be necessary because of C14 dating’. Radiocarbon dating revolutionised not only prehistoric chronologies, but entire approaches to the prehistoric past. Renfrew (1999, 17) has maintained that radiocarbon dating did not challenge basic assumptions until the 1970s, when calibrated chronologies destroyed diffusionist paradigms. However, these perspectives are belied by contemporary reactions; prehistorians soon knew their discipline was being transformed and they were excited. O. G. S. Crawford (1949; 1951) (1886–1957), editor of *Antiquity*, championed the development of radiocarbon early, disseminating knowledge to the wider community. Daniel (1960) wrote to Mortimer Wheeler: ‘I am not saying there is a New Archaeology, but there is a new Prehistory and we are slowly waking up to it.’ The paradigms proposed were already out of date in the eyes of the wider archaeological community.

Radiocarbon dating, first developed in the late 1940s at the University of Chicago by Willard Libby (1908–80), is a scientific method that accurately determines the age of organic materials as old as approximately 60,000 years (Bayliss 2009, 123–4). Early radiocarbon results were initially welcomed, but it was soon clear that dates for Europe and the Near East did not tie into traditional chronologies; relative and cross-dating with historical dates now looked untenable (Renfrew 1999, 60). Arguments broke out between supporters of radiocarbon dating and their opponents that would continue for decades (Renfrew 1999, 73). Even today, difficulties aligning historical and scientific dates remain (for example, Bietak and Höflmayer 2007).

Radiocarbon dating was the latest of a range of new scientific dating techniques that aimed to extend dating of the past ‘beyond the historical calendar’ (Zeuner 1950, v). These techniques, which used geological and biological analyses, comprised pollen analysis, tree-ring analysis, varved clay analysis (counting annual layers or varves in sediments), solar radiation methods and radiocarbon. Together, they formed the discipline of geochronology (Childe 1940c; Zeuner 1950, xv, 4). Great strides had also taken place in the stratigraphic-geological approach to excavation through the work of Clark and the Fenland Committee (Smith 1996, 11). Stratigraphy remained the most familiar source of chronological information for archaeologists (Bayliss 2009, 129) and contemporary thinking about its importance is central to the essay reproduced here. Childe’s visit to Star Carr in 1950, where Clark was furthering his palaeoecological approaches to excavation, may have proved inspirational for his conception of the essay (Diaz Andreu 2012, 196).

The essay, contemporary publications and correspondence indicate that Childe was familiar with scientific dating techniques. The new techniques opened new vistas for archaeology, but even before the emergence of radiocarbon dating, Childe (1944a, 18) urged that ‘still better methods must be invented’. His initial interest in scientific dating seems to have been stimulated by his association with pioneering geochronologist, Frederick Zeuner. Zeuner was appointed to an honorary lectureship in geochronology at the Institute in 1936, having fled Nazi Germany, where he had been Professor of Geology and Palaeontology at the University of Breslau (Evans 1987, 12–13). In 1946, he became Professor of Environmental Archaeology at the Institute, a position that he

held until his death in 1963 (Cornwall 1964). Before the outbreak of the Second World War, environmental archaeology was almost unknown; its development post-war was due largely to Zeuner, an outstanding pioneer in the field (Summers 1964).

Harris (2009, 130) has claimed that Zeuner's work had a negligible impact on Childe. Brothwell (2016, 18) has further stated that Childe was not convinced of the importance of the sciences in archaeology. There is considerable evidence to contradict both these opinions. At the Conference on the Future of Archaeology, held at the Institute of Archaeology in August 1943, Childe (1943) chaired a session on the 'Training of Archaeologists' in which both he and Zeuner (1943) advocated for the training of students in environmental techniques. Childe subsequently made suggestions for Zeuner's (1946, viii) ground-breaking book *Dating the Past*, demonstrating the respect paid to his opinions by Zeuner. Furthermore, it was under Childe's directorship that the ground-breaking appointment of Zeuner as the world's first Professor of Environmental Archaeology was made (Cornwall 1964). Such evidence suggests that Childe was not disinterested in Zeuner's work; rather, the two men shared and promoted an interest in science in archaeology.

Zeuner was quick to appreciate the significance of radiocarbon dating to archaeology and was instrumental in producing some of the earliest radiocarbon dates on archaeological material. In 1949, Libby visited London to speak to the Royal Society about the new technique, lecturing at the Institute the same afternoon (Harris 2009, 130). In November 1950, Zeuner published his first article on radiocarbon dating, reporting on recent discussions and describing the method. He was cautiously welcoming, stating that it had the potential to settle 'many outstanding chronological problems' (Zeuner 1950). He began to develop his own pioneering research project on radiocarbon dating, based at the Institute in collaboration with the Davy-Faraday Research Laboratory (Harris 2009, 130). As Childe was then Director of the Institute, this project must have received his approval. In 1954, he showed his support for Zeuner's work by ensuring that the Institute of Archaeology Management Committee provided special funds for Zeuner to attend a symposium on radiocarbon dating at the Copenhagen laboratory, 'in view of the exceptional importance of the conference' (Childe 1954) (see Figure 5).

A few weeks after Zeuner's article, Childe (1950c) published a response. This should not be read as a challenge to Zeuner's statements, but rather as a continuity of his cautious optimism. Childe demonstrated his knowledge of climatic phases and pollen zones but pointed out the problems of discrepancies in radiocarbon dates, which needed further work to correct. He ended by stating that 'a mere archaeologist feels that the method will require considerable checking and refinement before it can provide reliable dates for prehistoric events' (Childe 1950c, 1069). Childe's scepticism was prescient; radiocarbon dates needed to be calibrated, a process that did not become routine until the 1970s, and he was not alone in his caution (Bayliss 2009, 125; Bushnell 1951; Crawford 1951). Zeuner and Childe's articles on radiocarbon dating came at around the same time that Childe drafted the essay and began to reject the idea of a standardised framework for prehistoric chronologies built on relative dating in favour of scientific dating. Despite his caution, Childe already sensed what radiocarbon might mean for European and British prehistory.

Correspondence suggests that Childe was aware of radiocarbon dating from its inception. A letter written in 1946 to American archaeologist Robert Braidwood (1907–2003), a close friend, reveals Childe's excitement about 'isochron charts' that Braidwood and his wife Linda (1909–2003) were developing, as part of their ground-breaking work

1st June, 1954.

Professor F. E. Zeuner.

Dear Frederick,

I am glad to say that in view of the exceptional importance of the Copenhagen conference the Management Committee have agreed to offer you £25 as a contribution towards your expenses. I am to insist that this is not to be taken as a precedent and I may add that the Committee, having been advised accurately as to the practice in other colleges and Senate institutions, did not seem very favourable to the establishment of a regular fund from which allocations for such purposes could be made. At the moment, of course, there are no funds for this purpose available and when the Committee come to consider their estimates for the next quinquennium they will naturally be liable to give precedence to such items from the approved B Estimates as Tutorial Fellowships and studentships.

Yours sincerely,

Figure 5 Letter from Gordon Childe to Frederick Zeuner of 1 June 1954 supporting his attendance at the Copenhagen seminar (Source: Professor F. E. Zeuner Staff File [1936–97], UCL Records Office)

on radiocarbon dating with Libby at the University of Chicago (Moore 2003). Childe clearly appreciated the need to correlate with other scientific dating results. He wrote to Braidwood: ‘there must be something wrong about the very high dates assigned to Neo[lithic] in Sweden – a correlation with the wrong transgression, incorrect pollenanalytic dating or some defect in de Geer’s system – it all rests on one site the name of which I forget’ (Childe 1946c).

In April 1954, his student Jay Jordan Butler, then in Denmark, wrote to him on behalf of the Copenhagen laboratory, asking for help in obtaining materials that would provide comparative dates for the early European Neolithic, particularly charcoal samples from ‘a well-attested early Danubian 1 association in southeast Europe’ (Steedstra 2018, 105). Childe replied:

I am very excited to hear that the Danish are already running their C14 counter and have got such a nice date for Cortaillod. I think they might try another chunk from Ehensiders tarn with advantage. Brailsford has plenty not burnt. I cannot easily suggest anyone in south Eastern Europe. (Steedstra 2108, 108–9)

He subsequently suggested contacts in Vienna, Prague and Hungary who could provide samples and in a later letter, a contact in Italy (Steedstra 2018, 113).

Childe (1958a) knew that his chronological frameworks were now ‘frankly shaky’ (Runnells 1995). But we should not underestimate his ability to act within opposing frameworks (Vitores 2023, 271–2). Childe was gradually accepting the new radiocarbon dates, but in the same letter to Butler, he revealed that he still relied heavily on the artefacts

and constructs present in the essay and other contemporary writings to think his way through prehistory:

In that region [the Highland zone] we want to make everything start later than in Southern England because we certainly lack counterparts to the Deverel-Rimbury and also Iron Age and even threatened with a curtailment of the Abernethy culture by Wheeler. It is for this sort of reason that even I have put the whale-bone buckle from Brackmont Mill, X centuries later than its exact counterpart in Bush Barrow and so with the razor and associated urns. (Steegstra 2018, 108)

Despite Childe's advocacy of radiocarbon dates, his vast, complex chronologies had been so key to contemporary understanding of the prehistory of Europe that their eventual collapse, caused by new radiocarbon dates, was inextricably linked to him, particularly in the years of transformation immediately after his death (Renfrew 1999, 51, 117; Tringham 1983, 86). Daniel (1960) wrote starkly, 'the basis of our conventional Childe dating was non-existent'. Piggott (1975) took a similar stance: 'I think he saw the implications of C14 dating, if not the anti-diffusionist, anti-historical reaction which was to follow.'

This vision of Childe's as a doomed diffusionist belies the nuance of his later works. By 1953, Childe, was using radiocarbon dates in his teaching⁵ and in his publications, notably the final edition of *The Dawn of European Civilization* (for example, Childe 1957, 9, 109, 162). In his last published works (Childe 1958a, 1958b), he did continue to champion diffusionist approaches, but also emphasised the need for 'an absolute chronology'. Radiocarbon represented a way forward (Childe 1958b, 1–2). Nor should we underestimate his powers of reinvention. Don Brothwell (1933–2018), one of Childe's last students, viewed the attitude that radiocarbon dating defeated Childe as a 'serious miscalculation'. He claimed that Childe was rethinking prehistory at the time of his death (Brothwell 2016, 18). Even in his last weeks in Australia, Childe was still pondering temporal sequences; toying with the idea of removing periods from prehistoric chronologies (Morris 1960). Childe's thinking about time, as he ran out of it himself, was progressive and mutable to the very end (Runnels 1995, 497–8; Tringham 1983, 92).

Conclusion

Reproduction of a previously unpublished essay by Gordon Childe provides us with new opportunities to explore one of the key intellectual themes of his career: prehistoric chronologies. Debates on the extent of Childe's Marxism tend to dominate narratives about his later career, but the essay reminds us not only of his broad interests and prolific output, but also of his continued ability to innovate and think creatively across the entire spectrum of his interests. He returned frequently to the same themes, aspects and examples, a process visible in the essay; for example, the concept of archaeological technological stages as 'strata', found widely in his later works (Harris 2009, 124; Vitores 2023, 271).

The essay sheds light on Childe's close relationship, both personal and intellectual, with Christopher Hawkes. The two men shared similar devotion to their subject, similar research concerns and a similar ability to innovate, often in an abstract way. Hawkes, like Childe,

was one of the first archaeological theorists, sharing his interests in prehistoric chronologies and the importance of science for archaeology. After Childe's death, these shared concerns remain constants in Hawkes's later work. During his later career, the main opposition to his dominance over prehistoric chronologies came from Childe's former student, Jay Jordon Butler. Based in the Netherlands, Butler also became a scholar of significant stature and influence in European prehistory (Burgess 2004, 349). It is through Hawkes and Butler, Childe's other students and his own writings that we can see his continued influence on the development of British and European prehistory. Significantly, Hawkes never seemed to have struggled with the 'ghost of Gordon Childe', unlike both Piggott and Clark, perhaps because of the strong similarities between their work (Clark 1976; Piggott 1958; Sherratt 1989, 185).

The context of the essay reveals post-war frustrations about inaccurate chronologies and dating. These problems invigorated and united an alliance of individuals. Their collective desire for change and the establishment of universal chronological standards pushed archaeology into decisive self-consciousness. Although this self-awareness was limited to a small group, they came from across discipline, indicating that it arose from wider disciplinary maturity. Childe both encouraged and sabotaged attempts at change because, in his ability to understand the tensions between science and humanities underpinning archaeological narratives, he was able to see what his colleagues did not, that absolute dating would change the entire landscape of prehistory. The future lay not with frameworks based on relative dating but with new scientific dating techniques. He was at once a leader and a maverick, prescient, innovative and unpredictably uncooperative.

Childe was aware that this future might come at the price of the destruction of his life's work. But we should not necessarily follow established narratives that he feared these changes, nor repeatedly reproduce one definitive 'version' of Childe's past. Rather, we should reassess, revisit and challenge our understanding of his life and work as new evidence becomes available. Childe was at once both one of the first 'modern' archaeologists and an empirical diffusionist (Vitores 2023, 272), but his greatest commitment was to the idea of progress in archaeology, moving forward boldly to new understandings of the past.

Appendix 1: uncorrected transcript of 'An Essay on the Prehistoric Chronology of the British Isles' by V. G. Childe⁶

The chronological tables I append to my books can be compared to parallel glass tubes into which the distilled results of stratigraphical excavations have been tipped so as to invert the sequence and put the oldest and deepest material at the top. Each will contain a series of suspended sediments, easily distinguishable in colour and texture. Though the same or very similar sediments occur in each tube, there are some confined to one or two. In Southern England, nine are easily recognized; in the Scottish tube, only 6; in the Irish hardly more than 4. Traditional patriotism requires us to fill the tubes as full as possible, while local jealousies demand that the levels of the several solutions should be kept more or less parallel in each tube. To fill the tubes to the traditional height the solution – or rather suspension – has been heavily diluted, but a critical agitation of the apparatus has caused the solid sediments in the suspensions to settle down towards the bottom – always retaining their relative positions, of course – so that the levels of dense matter in each tube are steadily shrinking.

Now the bottoms of the tube are not quite level. A solid bottom for the Southern English tube is provided by the Claudian conquest of AD 43; Agricola's campaign of AD 83 produces a fairly solid bottom for the Scottish tube. But there is nothing so high to stop leakage from the Irish tube. Above the bottom of the English tube there are also fairly watertight blockages which prevent any appreciable downward seepages of the sediments labelled respectively Iron Age B, Iron Age A, Deverel-Rimbury and Wessex, though these blocks themselves have been slipping downward appreciably. So the boundary between A and B has sunk from 250 BC to nearly 55 BC, with some corresponding fall in the beginning of A – from 600 nearly to 400. But the Wessex stopper still seems to hold about 1350 BC, though the Bronze Age solution below it remains excessively thin. In Scotland the stoppers are less effective. The pins that once held the Abernethy culture as high as 200 BC have been ruthlessly pulled out by Wheeler and Mrs. Piggott, leaving the level of the Abernethy settlement about 50 BC! And above that there is really no stopper at all; for typological agreements don't really block the forces of gravity as actual imports do. No one will content that the bone girdle clasp (or dagger suspender) from the urnfield of Brackmont Mill is necessarily or even probably contemporary with the gold one from Normanton, despite the exact agreement in form.

Moreover, several of the brightly coloured sediments that help to fill the English tube – Belgic, Iron Age A, Deverel-Rimbury – are missing in Scotland altogether. To keep up the levels we have not only to dilute our suspension, but even to pump in air bubbles. We have only 6 different sediments to fill the Scottish tube as against the English 9. But Eire has in effect only 4, and is leaking at the bottom, for there is nothing so solid as Agricola or even Abernethy to check the seepage down to the Patrician age. In Ireland we have no pre-Roman nor even Roman Iron Age; you can't really make an Iron Age out of half a dozen horse-bits (of bronze), pins or torques, and a single votive hoard of La Tene weapons from a bog! Roman imports are associated, if at all, with Irish Bronze Age tools and ornaments (Annesborough; PRIA, xxxii, 1914, 171). The La Tene products best dated in Irish terms come from beneath a cairn of early Bronze Age type (Lough Crew).

The basal sediments in the Irish tube today are then Bronze Age and they are admittedly dense enough to fill a substantial segment. They consist, however, of two quite discrete kinds – the abundant bronze objects and the tombs, pots and settlements of different peoples who presumably used some of the objects. The bronzes themselves are varied enough to allow of a typological division which is plausibly parallel to that worked out in Britain. And in some cases exports of actual Irish manufactures allow us to fix independently the beginning of some divisions. Undoubtedly Irish decorated axes or halberds show at least that this phase of local industry had started production as early as 1400 BC. That halberds did not immediately go out of fashion may be deduced from the Islay hoard continuing one with a socketed axe. The cauldron, no less certainly Irish, gives less exact lower limits for the beginning of the last phase of Bronze Age industry. The cauldron from Llyn Fawr was associated with an Early Hallstatt sword (which in Central Europe was superseded about 550 BC), but the handle from Dowalton Loch comes from a crannog of the usual Iron Age Romano-Caledonian type. The Llyn Fawr cauldron, however, was found above and presumably later than a Recurrence Surface most plausibly dated on Danish analogies about 400 BC. The only pollen-dated Irish objects of Late Bronze Age type again come from above a comparable surface similarly dated by Jessen. It is true that Godwin and Mitchell have suggested an alternative dating for this

recurrence surface, but they seem to have been influenced by archaeologists' clamour rather than palaeobotanists' claims.

But even if the sediment produced by the Irish bronze industry can to this extent be stabilized and spread over 1500 years this will have little if any effect on checking the downward seepage of domestic relics; for these are hardly ever associated with the bronzes. The Carrowjames razors seem very degenerate derivatives of a late British type associated with equally degenerate urns of British ancestry. The single Wessex dagger from Topped Mountain is no more use for dating than the bone hook from Brackmont Mill. The Moylough burial may show that halberds were still in use when Food Vessels were fashionable sepulchral vases, but Islay emphasizes the longevity of those weapons! Davies argues from Loughash that palstaves were being made at the same time as Beakers, but only if Beakers were contemporary with Encrusted Urns (UJA, ii, 1939, 267).

The domestic sediments themselves consist of ceramic and sepulchral types paralleled in and plausibly derived from members of the British sequence. If some English types are missing in Eire as in Scotland, others – the Secondary Neolithic and Food Vessel pottery – enjoyed a more exuberant and presumably longer development, while megalithic architecture had time to branch out into variants unparalleled on the larger island. Thus pot and tomb types can be spread out to fill a larger volume in the Irish tube, but nothing guarantees equilibrium with the English. On the contrary, most Irish cinerary urns would be classed as late on the British typology. At Cush burials in such urns were found apparently intruded into a pre-existing rath in which was found also a rotary quern that in England would not be older than 50 BC. So too the commonest types of Irish Food Vessel correspond to West Scottish forms that must be 'Late Bronze Age', taking the place occupied by the mature form of Cinerary Urn in the Lothians and Fife. Davies claims that Ulster Beakers are contemporary with Encrusted Urns and at Lough Gur no clear ceramic change separates the layers containing Late Bronze Age razors, etc., from the mixed Beaker-Secondary Neolithic levels lower down. And here Beakers and even Neolithic pottery overlap with distinctively Irish – and therefore on the Scottish evidence – late – Food Vessels! It is true that some Beaker and Secondary Neolithic must at least – like the Early and Middle groups of bronzes – be kept above the 400 BC pollen-dated mark. But nothing keeps the rest from trickling down to fill the underlying domestic vacuum – in which Bronze Age smiths were busy making shields and cauldrons, swords and gorgets for use by tribes who made no pots and built no tombs unless they were the Bronze Age Beakers, Food Vessels, and Urns, the corbelled passage graves, cists and urnfields! And the same archaeological vacuum is filled in the poetic record with the exploits and also the palaces and tombs of the epic heroes! Should we not after all accommodate some of these in raths like Cush and allow the nobles of Ulster to reclaim the tombs of Sliabh-na-Caillighe and Brugh-na-Boinne which the Leabhar na h'Uidhre implicitly attributed to them. After all, the most reliable evidence for dating a sculptured Boyne tombs are the bone plaques with La Tene engravings, and the spiral carving themselves develop in the illuminated MSS, and metal work of Early Christian art! The Wessex parallels to the Boyne beads are no more chronologically useful than the bone clasps, but the glass dumb-bell bead from Sliabh-na-Caillighe does not look like a II millennium dumb-bell. And if you must have East Mediterranean models for the tombs you can find as good prototypes in Etruria, Thrace or Turkey in the Ist millennium (e.g. Mansel, Trakya-Kirlareli Kubbeli Mezarlari, Ankara, 1943) as at Mycenae in the IInd.

Of course if you let this slide start it will carry some poorly supported sediments from peripheral parts of highland Britain in its train. Skara Brae will slide down from its stony peak into contact with the Late Bronze Age Encrusted Urns, to which its ceramic art is so closely related, and consequently the Towie ball will approach nearer the Early Christian works to which Romilly Allen compared it.

Declarations and conflicts of interest

Research ethics statement

Not applicable to this article.

Consent for publication statement

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Conflicts of interest statement

The author declares no conflicts of interest with this article. All efforts to sufficiently anonymise the author during peer review of this article have been made. The author declares no further conflicts with this article.

Notes

- 1 Now held in the UCL Institute of Archaeology Library.
- 2 Vere Gordon Childe Archive, Miscellaneous 3, UCL Special Collections.
- 3 MS. 21042/8, Archive of C. F. C. Hawkes, Bodleian Library, University of Oxford; Correspondence A-E 1932, Correspondence A-E 1937, Correspondence A-E 1945, British Museum Central Archive; UCLCA/IA/D/2, UCL Institute of Archaeology Senate House Files, Vere Gordon Childe Archive, Miscellaneous 8, UCL Special Collections.
- 4 2/4/1/64; 10/1/6; 10/9; 15/4/3/1; 15/4/3/2 Jacquetta Hawkes Archive, University of Bradford Special Collections.
- 5 See the papers of Childe's former student, John Lewis Masters (1926–2019), particularly folder 9, https://ucl.primo.exlibrisgroup.com/discovery/delivery/44UCL_INST:UCL_VU2/12420623250004761.
- 6 MS. 21042/8, Archive of C. F. C. Hawkes, Bodleian Library, University of Oxford. Reproduced with permission of the Bodleian Libraries © UCL.

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