

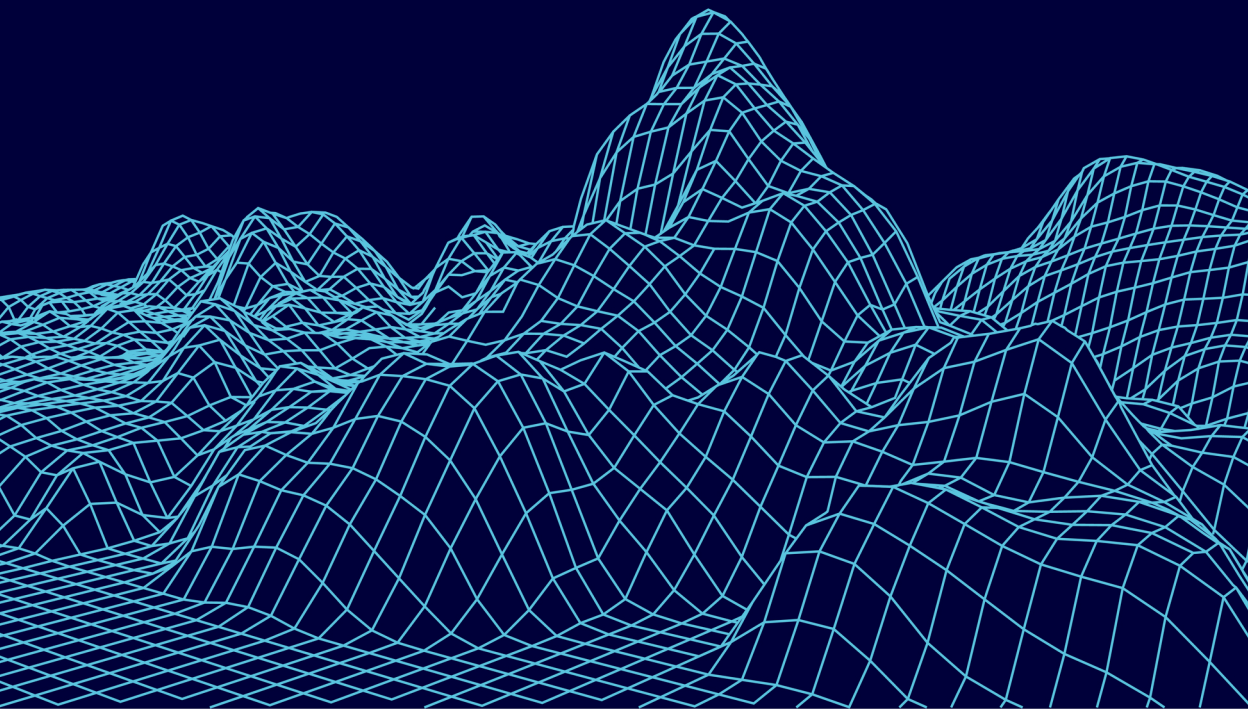


DOCTORAMENTO EM PATRIMÓNIO, TECNOLOGIA E TERRITÓRIO

*PHD PROGRAMME HERITAGE,
TECHNOLOGY AND TERRITORY*

SESSÃO DE ABERTURA / *OPENING SESSION*

Adolfo Silveira
Luiz Oosterbeek
(coordenadores científicos)





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FICHA TÉCNICA

TÍTULO

Doutoramento em Património, Tecnologia e Território
PhD programme Heritage, Technology and Territory

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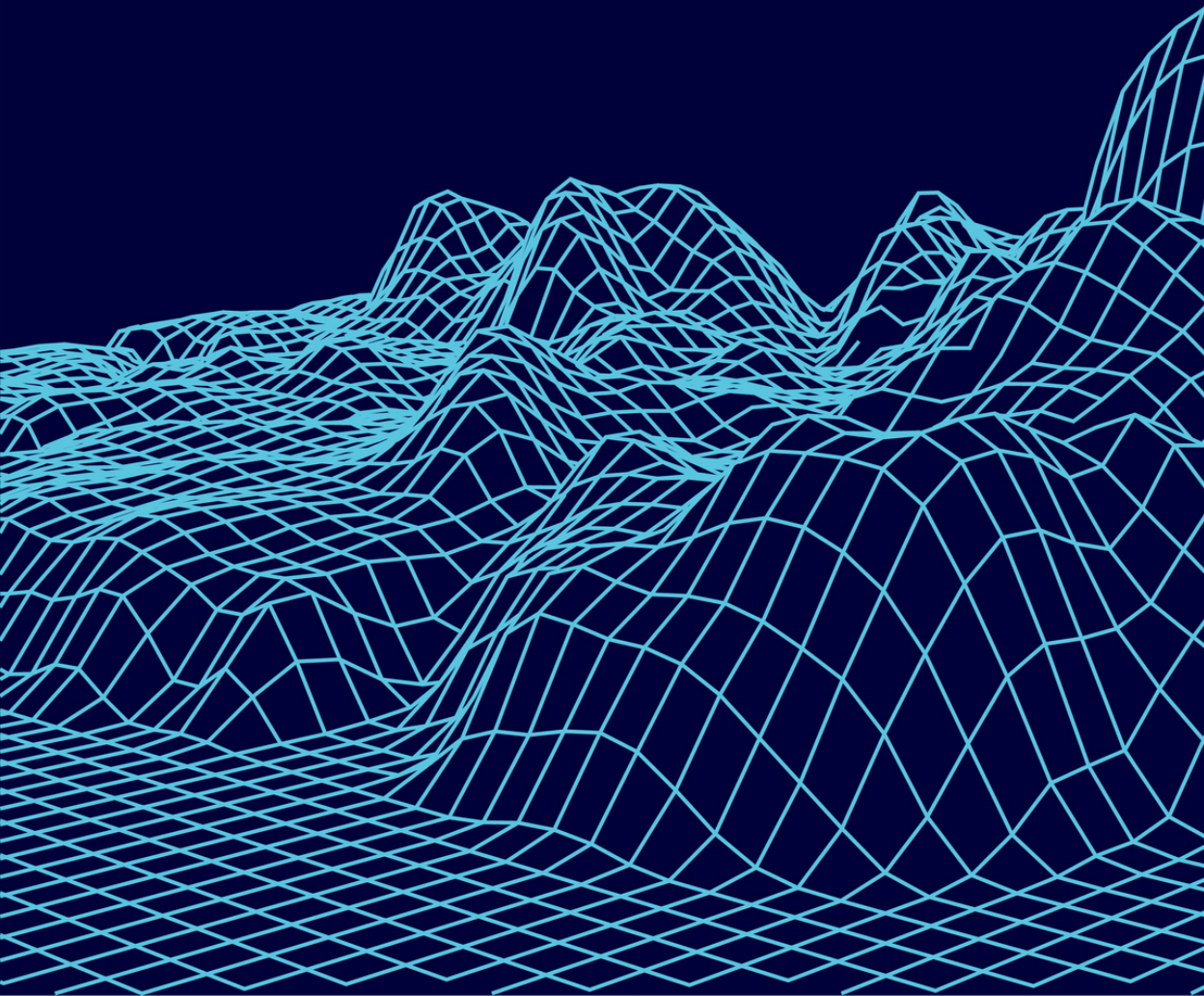
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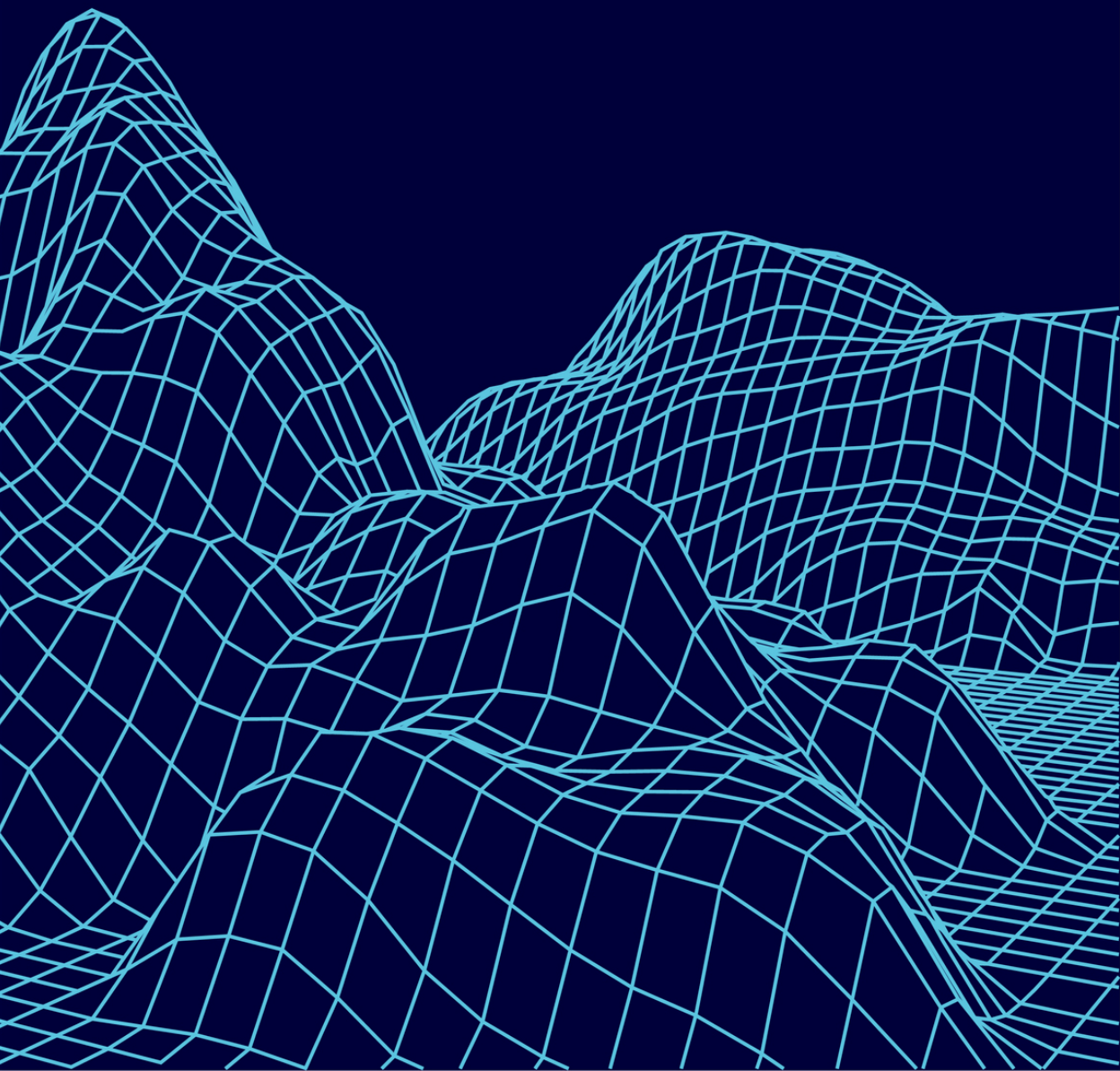
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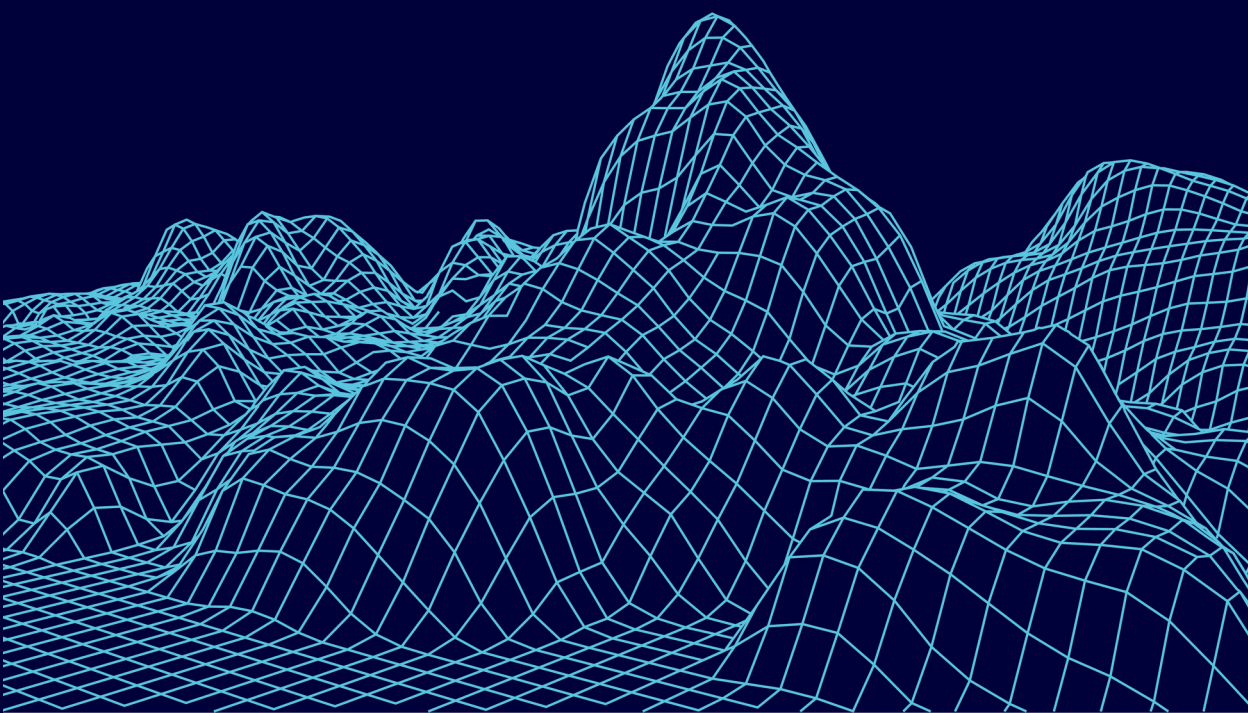
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PARTE I





NOTA DE ABERTURA UNIVERSIDADE AUTÓNOMA DE LISBOA

O Doutoramento em Património, Tecnologia e Território é fruto de um persistente trabalho de cooperação entre o Instituto Politécnico de Tomar e a Universidade Autónoma de Lisboa que, como Reitor, tive o gosto de acompanhar.

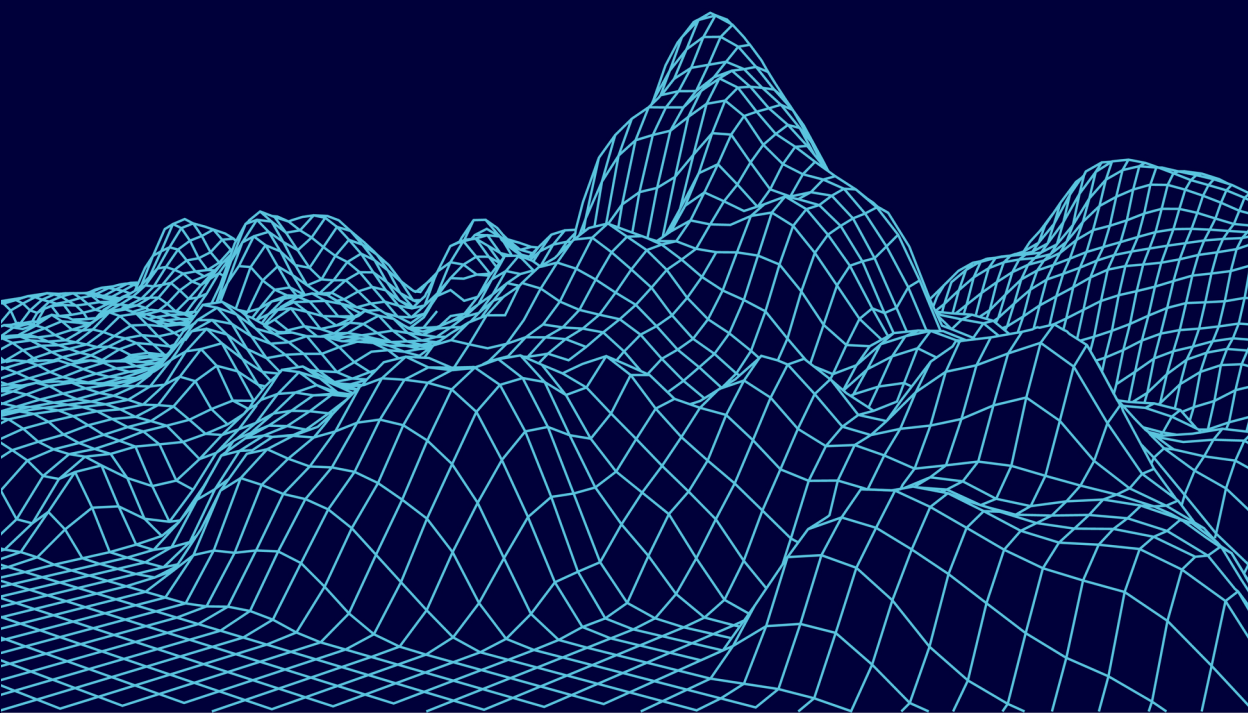
É um doutoramento singular, na medida em que inclui instituições do ensino politécnico e universitário e será lecionado a distância.

São dois desafios que, por certo, são a razão das condicionantes que lhe foram impostas e que devemos superar, mantendo a cooperação inovadora, de que a primeira sessão do doutoramento é já uma expressão prometedora, quer pelo número de estudantes inscritos, quer pelo conteúdo desta primeira sessão.

Quando se tanto se fala de interdisciplinaridade e sustentabilidade, eis que os temas das suas lições que o integram, quer pelo reconhecido mérito dos convidados, quer, sobretudo, pelo seu conteúdo, evidenciam, sem ambiguidade, a riqueza potencial deste doutoramento. Tornar esta potência um ato depende só de nós e da fecundidade da nossa relação.

Vamos a isso!

José Amado da Silva
Reitor da Universidade Autónoma de Lisboa



NOTA DE ABERTURA INSTITUTO POLITÉCNICO DE TOMAR

A afirmação das Instituições de Ensino Superior (IES) é, principalmente, sustentada na qualificação da sua cadeia de valor, onde as atividades de investigação, desenvolvimento e inovação (ID&i) e de formação, nomeadamente os programas de formação avançada e o envolvimento em parcerias e consórcios, são determinantes para o cumprimento das suas missões.

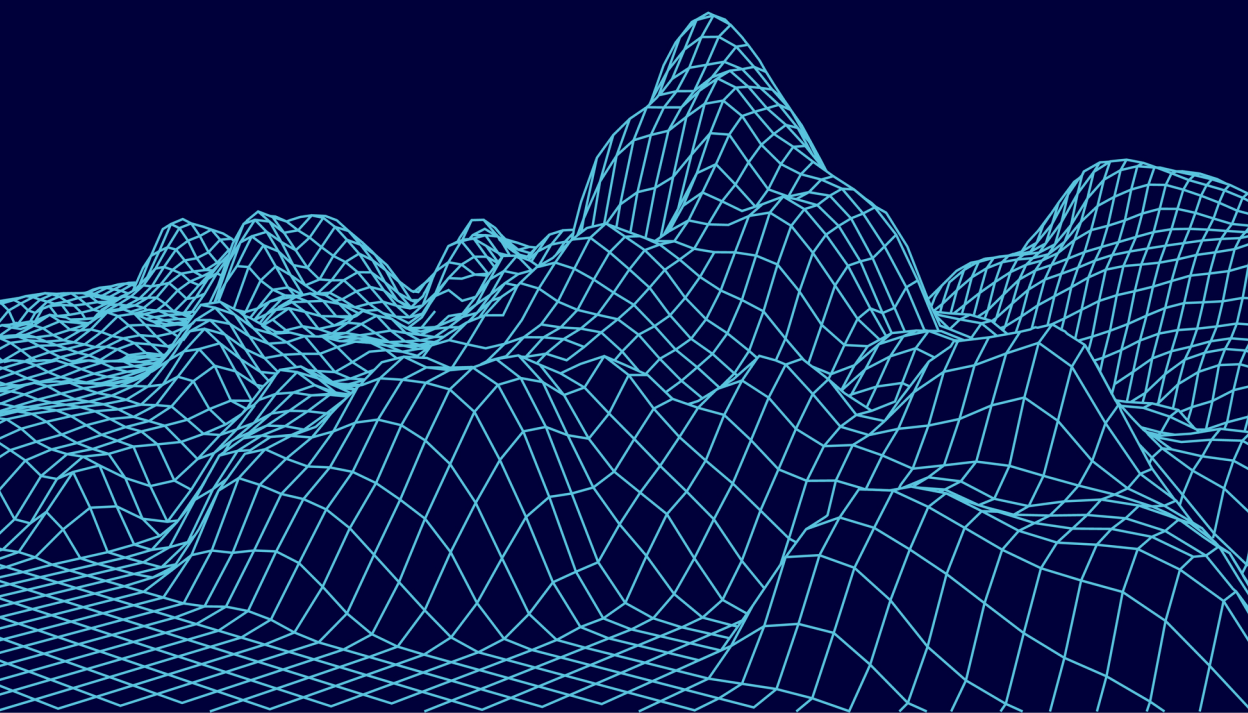
O Instituto Politécnico de Tomar (IPT) e a Universidade Autónoma de Lisboa (UAL) reforçaram a sua parceria através do projeto de Doutoramento em Património, Tecnologia e Território (DPTT), ativando vários recursos de ambas as instituições, particularmente os recursos humanos altamente qualificados, assim como as infraestruturas laboratoriais associadas a unidades de investigação registadas e financiadas pela Fundação para a Ciência e Tecnologia (FCT), como os Centros de Geociências e o Techn&Art. Também concorrem para a qualidade deste doutoramento, em benefício dos seus estudantes, os programas da Cátedra UAL de História e Cultura Luso-Brasileira e da Cátedra UNESCO-IPT em Humanidades e Gestão Cultural do Território, para além das várias parcerias, das quais deve ser destacada, a Knowledge Creativity European University - KreativEU, liderada pelo IPT, formada no âmbito do projeto das Universidades Europeias, promovido pelo programa ERASMUS +.

Este doutoramento é igualmente inovador no que concerne à sua organização, permitindo, através de um calendário racionalmente planeado, a gestão do tempo em conformidade com as atividades e os interesses dos estudantes.

Finalmente, não posso deixar de sublinhar a importância deste doutoramento na matriz fundacional do Instituto Politécnico de Tomar e o caráter universalista que está na base deste projeto inovador que abraça, difunde e reforça a missão, a visão e os valores que persegue.

Instituto Politécnico de Tomar, 26 de Julho de 2023

João Coroado
Presidente do Instituto Politécnico de Tomar



NOTA DE ABERTURA DEPARTAMENTO DE HISTÓRIA, ARTES E HUMANIDADES

A abertura em março de 2023 do novo programa de Doutoramento em Património, Tecnologia e Território (DPTT) vem dar continuidade a uma parceria antiga entre a Universidade Autónoma de Lisboa (UAL) e o Instituto Politécnico de Tomar (IPT).

A título de exemplo, podemos lembrar que a Pós-Graduação de Arqueologia Subaquática funciona há mais de uma década, cujo sucesso, ao longo das várias edições, tem permitido manter uma oferta original no campo da arqueologia e tem traçado novos trilhos e modelos pedagógicos para o ensino superior. Essa iniciativa tem contribuído também para consolidar e aprofundar a colaboração entre professores e investigadores das duas instituições.

A formação proposta pelo DPTT distingue-se pelo seu carácter inovador. A aposta no modelo de ensino a distância poderá, com certeza, assegurar condições otimizadas para a constituição de uma nova comunidade de ensino e investigação, sustentada pelo dinamismo e a criatividade de estudantes nacionais e estrangeiros. O projeto científico do DPTT abre novas perspetivas de investigação no cruzamento entre história, arqueologia, tecnologia e os estudos do património. Este novo programa de doutoramento propõe articular várias abordagens disciplinares, questionando as fronteiras entre disciplinas e oferecendo aos alunos um percurso rico e diversificado, com abordagens teóricas e práticas. A ambição presente e passada do Departamento de História, Artes e Humanidade (DHAH) da Universidade Autónoma de Lisboa e as experiências acumuladas ao longo dos anos, encontram neste programa um prolongamento natural.

O DPTT vem de facto reforçar a oferta de terceiro ciclo do DHAH. As áreas da investigação do departamento têm beneficiado do dinamismo da Cátedra de História e Cultura Luso-Brasileira, criada em 2015,

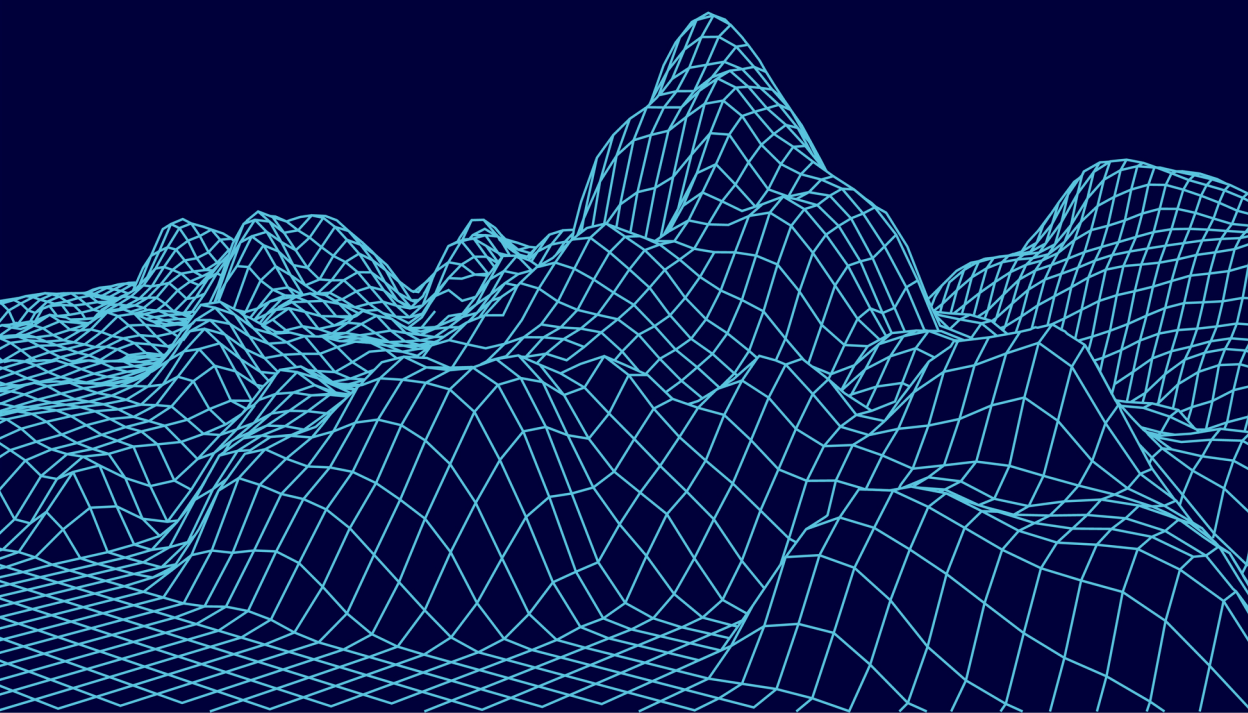
que constitui uma ferramenta essencial para a visibilidade internacional do DHAH e para a criação de parcerias com instituições brasileiras de grande prestígio. As suas ações incluem a organização de conferências com investigadores que desenvolvem pesquisas nestas áreas, a promoção de estágios de discentes e docentes na UAL e, em sentido inverso, nas instituições com as quais a UAL celebrou convênios. O sucesso destas parcerias e das ações voltadas para a promoção de estudos em História e Cultura Luso-Brasileira, traduz-se no número de alunos oriundos do Brasil matriculados nos três ciclos de estudo oferecidos pelo DHAH.

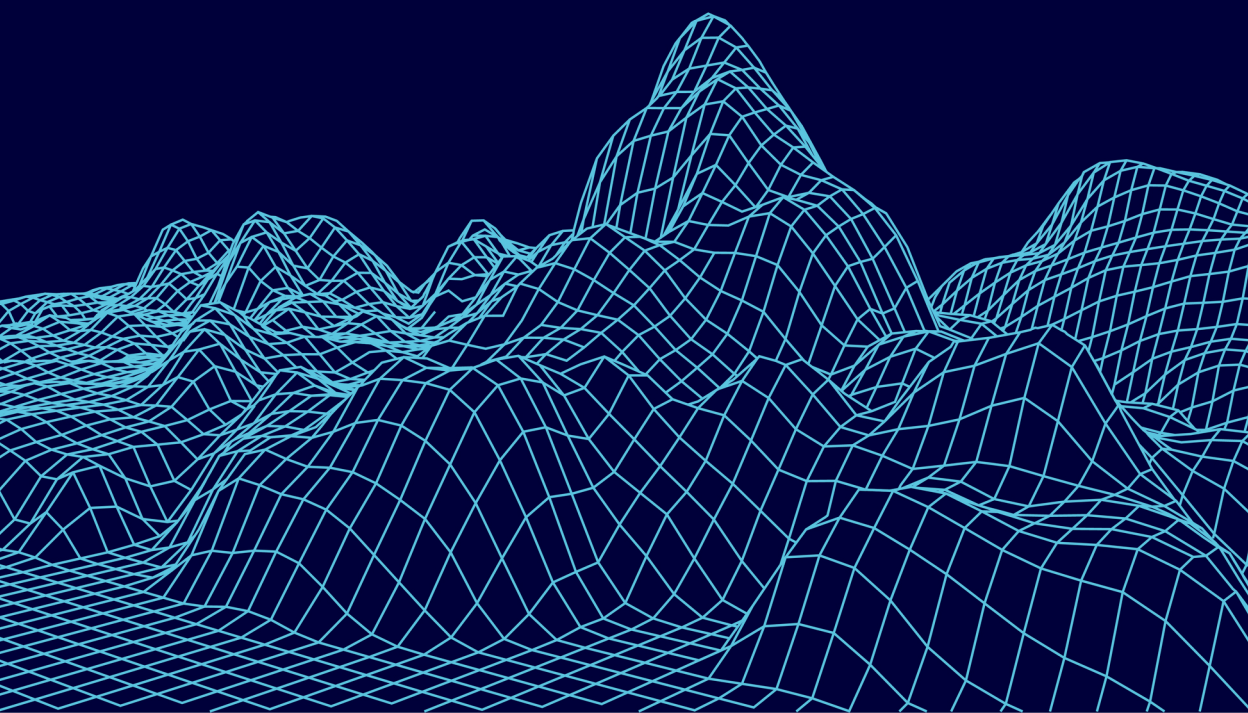
O DHAH possui, até ao presente, duas unidades de investigação próprias: o Centro de Investigação em Estudos Históricos (CICH) e o Centro de Estudos de História empresarial (CEHE). O CEHE é uma estrutura flexível capaz de estabelecer parcerias locais e está mais vocacionado para a investigação aplicada e para a prestação de serviços. A atividade do CICH esteve até agora estruturada em quatro linhas temáticas: História da Arte e do Urbanismo (século XVII - XVIII); História e Sociedade (século XIV - XVIII); Arqueologia; e História e Cultura das Organizações (séculos XIX e XX). O Centro tem promovido uma reflexão estratégica com vista a reforçar a institucionalização das atividades de I&D no departamento, delineando novas linhas de investigação em articulação com a oferta educativa, nomeadamente ao nível dos segundo e terceiro ciclos.

Recentemente, um grupo de professores do DHAH tem constituído um polo do CIDEHUS - Centro Interdisciplinar de História, Culturas e Sociedades, em parceria com a Universidade de Évora.

Estes esforços e linhas de desenvolvimento estratégico já começaram a dar os seus primeiros resultados e continuarão a ser perseguidos com a mesma prioridade, contando agora com os novos caminhos abertos pelo Doutoramento em Património, Tecnologia e Território.

Frédéric Vidal
Diretor do Departamento de História, Artes e Humanidades
Universidade Autónoma de Lisboa





O PROGRAMA DOUTORAL

O Doutoramento em Património, Tecnologia e Território (DPTT) é um programa de formação avançada e de investigação, oferecido pela Universidade Autónoma de Lisboa e pelo Instituto Politécnico de Tomar. A materialização do comportamento exprime-se pela matriz de técnicas disponíveis que formam parte indissociável das identidades culturais e se perenizam sob a designação de património. Esse património, ao mesmo tempo tangível (objetos e estruturas) e intangível (saberes e processos), inscreve as identidades culturais na dimensão territorial de que emerge, inserindo-se nas rotas de intercâmbio de cada sociedade. É a compreensão deste processo que tem levado a reflexão académica internacional, bem como entidades intergovernamentais, como a UNESCO, a introduzir novos conceitos (como o de paisagem cultural), a propor novos instrumentos de gestão integrada dos territórios e a criar novos instrumentos de promoção da sustentabilidade que mudem o seu paradigma (como o programa BRIDGES).

O DPTT conta com a colaboração de dois centros de investigação da rede apoiada pela Fundação para a Ciência e Tecnologia (FCT): o Centro de Geociências e o Centro Techn&Art. Conta igualmente com a colaboração de duas cátedras: a Cátedra UNESCO-IPT em Humanidades e Gestão Cultural Integrada do Território e a Cátedra UAL de História e Cultura Luso-Brasileira. Trata-se de um projeto que reforça a parceria e a colaboração que, há já alguns anos, vimos a desenvolver e na qual estamos totalmente empenhados.

O objetivo geral do programa é o estudo da perenização das evidências de manifestações do comportamento humano no tempo, articulada com as dinâmicas, perceções e perspetivas das sociedades contemporâneas. Definem-se duas subtemáticas complementares entre si:

- Adaptações humanas às modificações contextuais no Quaternário (ramo de arqueologia, cultura material e comportamento humano);

- Construção de paisagens culturais em torno da patrimonialização dos produtos de antigas tecnologias (ramo de património, tecnologias e paisagens culturais).

Começamos por dirigir uma primeira palavra aos alunos, que são muito bem-vindos à nossa academia, nos quais depositamos grandes expectativas e que iremos apoiar, de modo a atingirem os seus objetivos com grande qualidade e ambição. Que os seus projetos se concretizem e que nos orgulhem todos de fazermos parte deste grupo, em que todos iremos aprender, com a diversidade e com o contributo de cada um de nós.

Acreditamos que em conjunto, poderemos criar um elo que irá promover e consolidar a investigação, na qual nos possamos rever e orgulhar, para prestígio das nossas instituições e para o avanço do conhecimento.

Uma segunda palavra para os colegas docentes, que tal como nós, com entusiasmo e empenho, nos acompanharam desde o primeiro momento e nos apoiaram em todas as diligências, com os seus inestimáveis contributos, melhorando significativamente a qualidade do projeto final. Nelles incluímos os nossos colegas do Gabinete de Assessoria Académica que nos aconselharam e ajudaram na complexa constituição e construção do processo. Aos nossos colegas das diversas estruturas do IPT e da UAL que conosco colaboraram, nomeadamente da Secretaria de Doutoramentos, da Unidade de Apoio ao Ensino a Distância da UAL e do Laboratório de Inovação Pedagógica e Educação a Distância do IPT, sempre incansáveis para que todo o processo decorra com normalidade, o nosso agradecimento. Por fim uma palavra de reconhecimento aos nossos dirigentes, de ambas as instituições, que desde o primeiro momento acreditaram e apoiaram esta iniciativa, incentivando e disponibilizando todos os meios para que a pudéssemos agora concretizar.

Este curso é de todos nós e apenas assim o poderemos concretizar em sucesso. É um projeto ambicioso porque não visa apenas a qualificação de quadros de liderança, mas também a produção de novos conhecimentos com impacto real na sociedade, quer em contextos locais e nacionais, quer na escala global, designadamente em parceria com a UNESCO.

Por isso contamos, todos os dias, com todos os que aqui referenciamos, desde os alunos aos nossos colegas da administração, com quem cons-

tituímos uma equipa em que depositamos toda a confiança e empenho. O nosso sucesso será atingido quando todos defenderem as suas teses e a sociedade reconhecer cada um destes contributos em favor da ciência.

O DPTT é uma nova experiência, que associa uma universidade privada a um instituto politécnico público, num modelo de Ensino a Distância pioneiro nesta dimensão no nosso país. Orgulhamo-nos por isso. Temos a pretensão de criar e qualificar quadros de especialidade em contexto de investigação, nomeadamente com os Centros I&D e as Cátedras que nos estão associados.

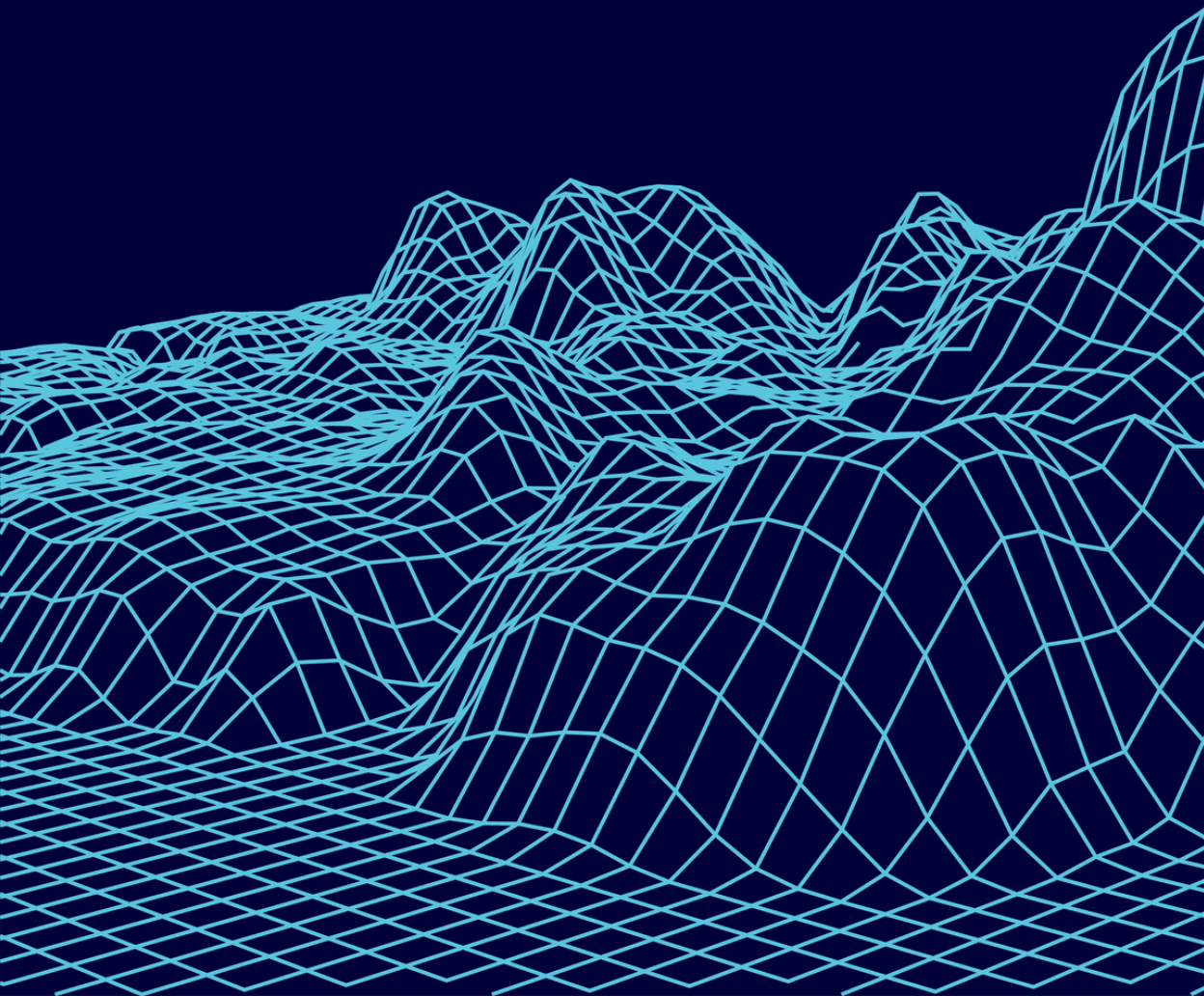
O programa do doutoramento assume como componente fundamental a articulação com os estudos comparativos, em diversos contextos territoriais (Europa, África, América do Sul e Sudeste Asiático), desenvolvidos pelos centros de investigação associados. Consideramos que o modelo de ensino a distância é o mais adequado para a prossecução de um programa global de investigação comparada em territórios de vários continentes.

O Curso pretende preparar os doutorandos para a sua autonomia, autoaprendizagem e desenvolvimento de competências transversais, com foco no trabalho em equipa. Irá decorrer em torno do cruzamento inovador do património, com as dimensões de transformação dos materiais (tecnologia) e da transformação do território (paisagens). É uma experiência em que todos acreditamos e está dirigido para a valorização, para a formação avançada e partilha de conhecimento.

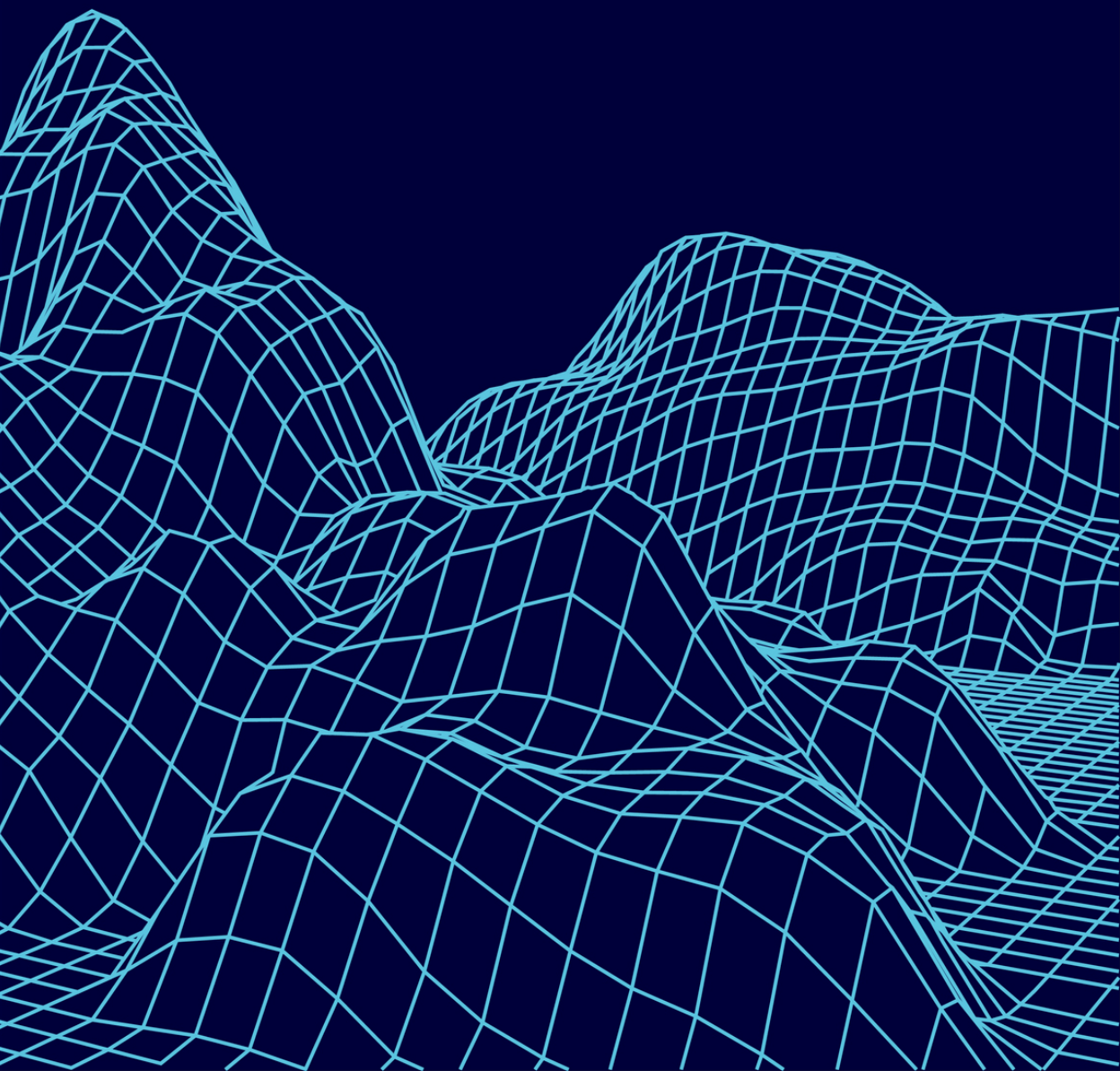
Nesta sessão de abertura contamos com duas conferências inspiradoras: de Lawrence Strauss, *Leslie Spier distinguished*, professor emérito do departamento de antropologia da Universidade do Novo México e de John Crowley, presidente do grupo PHGD e ex-responsável da secção de investigação, políticas e prospetiva do setor de ciências sociais e humanas da Unesco.

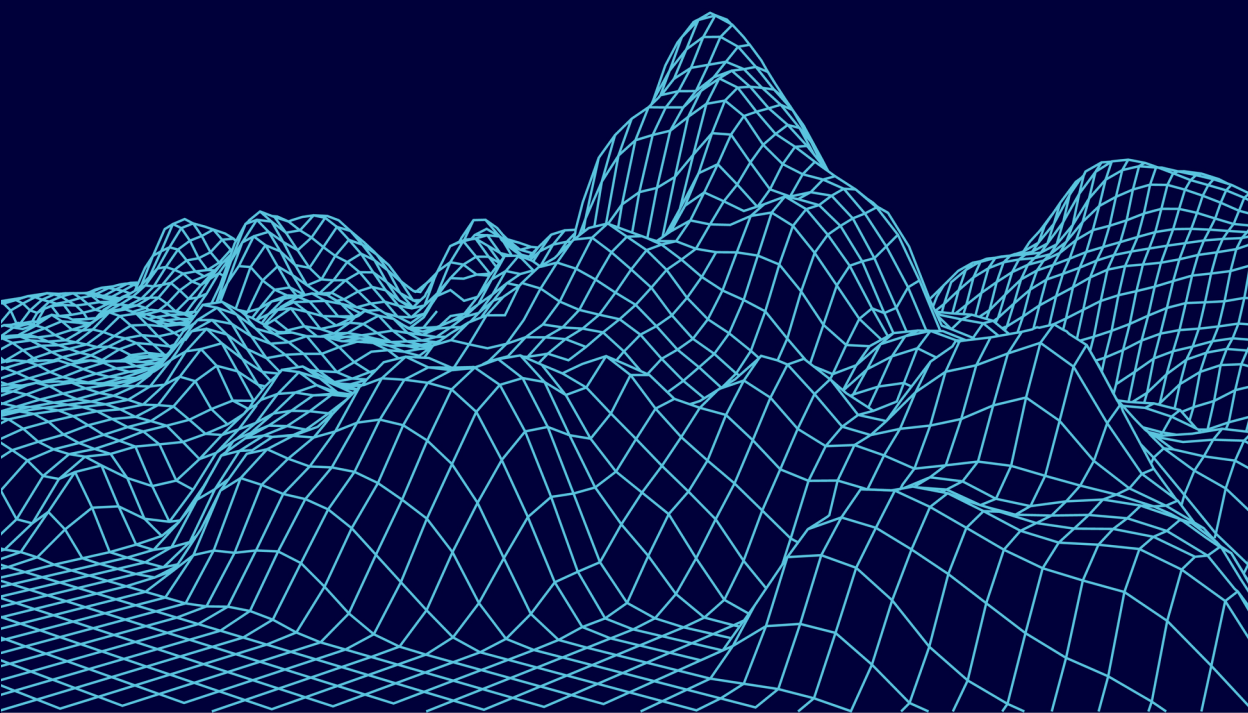
A ambos um agradecimento especial.

A Coordenação do DPTT
Luiz Oosterbeek, IPT
Adolfo Silveira, UAL



PARTE II





CONTROLLING THE PAST, CONTROLLING THE FUTURE SOME ORWELLIAN THOUGHTS ON SUSTAINABILITY

George Orwell's novel *Nineteen Eighty-Four*, published in 1949, is one of the best-known and most widely quoted political works of the 20th century. As anyone who spends time on social media knows, it is also less read than quoted, and often misunderstood or deliberately misinterpreted. To make sense of the novel, it helps to have some idea of its author, including his earlier work, and of his purposes, both literary and political. At the risk of going over ground that, for some readers, is exceedingly well-trodden, I'd like therefore to start with some remarks about who Orwell was and what he was trying to achieve, in this novel and other writings. And I'll also be summarizing the plot of the novel, at least in so far as it sheds light on the narrative and conceptual connections between past, present and future that are at the heart of Orwell's thinking about totalitarianism. My objective is to give some indications as to how these connections, in turn, help understand certain key aspects of the conceptual and practical challenges of sustainability.

As most readers know, *Nineteen Eighty-Four* was written in 1948, which is what led Orwell to choose, quite late in the drafting process, the title under which the novel would eventually be published. His working title, interestingly, was "The Last Man in Europe" - a probably unwitting echo of Nietzsche that illuminates many of the themes in the novel, as well as its overall narrative arc. The actual title, on the other hand, points to Orwell's stance and style. He was writing satire, in the spirit of Jonathan Swift, whom he admired. In other words, he was describing 1948, hyperbolically enhancing certain features in order to foreground a logic at work in the events of the day. The "1984" that emerges from the caricature of 1948 is, of course, a possible future - though not a prediction.

But more importantly, in Orwell's terms, it offers a deeper understanding of the present and of the past that led to it.

In a famous passage of his 1947 essay "Why I Write", Orwell judged, looking back at his output over a decade and a half, that he had written well when he had a clear political purpose - and, conversely, succumbed to literary affectation when his political purpose was absent or unclear. In this respect, *Nineteen Eighty-Four*, like its predecessor *Animal Farm*, shows great clarity of political purpose. Orwell was a "Democratic socialist" (he was pedantic about which word to capitalize) who also described himself as a "Tory anarchist". These apparently contradictory self-characterizations were reconciled by what he was opposed to: industrialism (especially its ugliness and destruction of nature), communism (less on ideological grounds than because of the authoritarianism and sectarianism of Stalinism), fascism (especially its anti-rationalism and cult of violence), imperialism, and the corruption of language by aesthetic indifference and ideology. Furthermore, Orwell's opposition to communism and to fascism emphasized the connections between them, on lines similar to those developed, independently and at exactly the same time, by Hannah Arendt in *The Origins of Totalitarianism*. Essentially, the world of *Nineteen Eighty-Four* is one in which the merger of communism and fascism has pushed industrialism, imperialism and the corruption of language to their logical extreme, and thus created a society in which the very possibility of being an ordinary, decent human being has been eradicated.

It is in this sense that the novel is the story of the "last man in Europe".

The plot unfolds in Oceania, one of the three rivalrous megastates into which, in 1984, the world is divided, of which Great Britain, now sardonically renamed "Airstrip One", is part. By implication, the rest of Europe is part of a different megastate - Eurasia - and one might therefore have expected Airstrip One to be a vulnerable territory or even a battleground. In fact, however, the three great powers have divided the world in such a way that their mutual borders are reasonably secure - though bombs do occasionally fall on London, where the novel is set. The system of which all three states (the third being Eastasia) are part is one of perpetual war, which means that there is a shared interest in

the integrity of each state's core territory. Satirizing and presciently extrapolating the logic of Yalta, it is explained in the novel that the actual fighting is concentrated in the tropics, where abundant natural and human resources are available for exploitation and where military defeats and victories are conveniently distant.

The political system of Oceania - and, by implication, of Eurasia and Eastasia as well - is a comprehensive and fully realized form of totalitarianism, combining and extrapolating the characteristics of Nazi Germany and the Stalinist USSR. Power, authority and the means of violence are exclusively concentrated in the Party, which comprises 10% of the population, selected meritocratically and subject to strict discipline and permanent surveillance, and is in turn divided between an Outer Party and a much smaller leadership called the Inner Party, which enjoys extensive material privileges. Non-Party members, who are called "Proles" by Party members, are a downtrodden workforce, deprived of education and largely exempt from disciplinary control, although not from surveillance. The Party is led by a mythical, iconic and possibly fictitious figure called "Big Brother" in whom all power is ultimately vested. In a telling aside, which is also a strong echo of Arendt, the reader is told that nothing in Oceania is illegal, since there are no longer any laws. This means that Big Brother's absolute and complete authority is entirely arbitrary. It's doubtful whether Orwell was aware of the work of Carl Schmitt, but Big Brother works perfectly as a satire of the Schmittian idea of the "exception" as the locus of authority. In a comprehensively totalitarian regime, literally everything is, in Schmitt's sense, an exception. It is therefore a regime that maximizes unpredictability, and thus fear.

The logic of the political system of Oceania, rooted in an ideology called IngSoc, the satirical thrust of which is obvious, emerges from the novel in a fairly detailed but necessarily piecemeal way, but is also stated explicitly and systematically in an appendix (omitted from some editions), which presents itself as an excerpt from a banned book written by a dissident intellectual called *The Theory and Practice of Oligarchical Collectivism*. This literary device allows Orwell to clarify both his fictional universe and his political purpose, particularly on points that it would have been awkward to put directly in the mouths of his characters.

The story is of one man's failed revolt against the system. The protagonist, Winston Smith, is a nondescript member of the Outer Party whose only unusual feature is an interest in the past, manifested both in his own memory and in certain objects that have happened to come into his possession. In both respects, this interest violates Party discipline and puts Winston in permanent danger of detection or denunciation. However, his cultivation of an individual space of privacy, while a grave violation of the Party's expectations, remains short of revolt until his interest in the past is supplemented by love for a woman called Julia, creating a shared space of privacy that is even less acceptable to the Party. After a brief honeymoon period of happiness, Winston and Julia are entrapped by an Inner Party official called O'Brien, arrested, tortured and re-educated. The betrayal of each by the other ends the revolt and renormalizes them. The novel ends when Winston admits to himself that he loves Big Brother - the impersonal, abstract love that is the only one that the Party can permit.

The crucial role that Winston's interest in the past plays not just in the plot of the novel but in its atmosphere and structure, as well as in Orwell's underlying political purpose, is the rationale for this paper. To understand why the past matters so much requires a more detailed analysis of the Party's ideology.

Understandably, given the real-world regimes Orwell was satirizing and his strong interest in the politicization of language, Oceania is full of slogans, and many of those quoted or referred to in Nineteen Eighty-Four have become memes in popular culture, known, sometimes in rather garbled form, even to people who've never read the novel. For present purposes, the Party slogan that deserves analysis is one Winston quotes quite early in the story, as he writes - illegally and dangerously - in an old notebook acquired in a Prole antique store (actually run by the Thought Police, though that becomes apparent only much later). The slogan is: "He who controls the past controls the future, and he who controls the present controls the past."

This slogan has a particular resonance for Winston because of the nature of his Party work, which is to write for the Party newspaper, the Times. (As a journalist himself, Orwell was acerbic about the British press of

his time, and his choice of title is of course satirical.) Ideologically, the Party is and must always be correct on all things. This means that writing for the Times involves not just creating new ideologically correct content, but constantly revising past editions to ensure consistency with the present - and thus necessarily often-changing - Party line. For instance, every time alliances shift between Oceania, Eurasia and Eastasia - as happens periodically, usually associating two of the three against the third - past news must be revised to ensure that the present alliance can be presented as having always existed. (Again, Orwell's satire of Communist Party contortions about the Nazi-Soviet Pact of 1939 is transparent.)

Of course, this process of ongoing alignment can work only if it applies to all sources of information, not just the Times. And it does. It's also made easier if there are few alternative sources of information - and the Party makes sure there are. But it would still be fragile if it competed with memory. Which is why Party members are trained and expected to cultivate an art of selective amnesia, which extends even to the act of deliberately forgetting. This is satire of course. It arguably makes little sense even as an idea, and the novel doesn't attempt to give it any psychological, neurological or technological plausibility. The point is to push to its logical conclusion the claim, built into the totalitarian cult of personality exemplified by Nazi Germany and the Soviet Union (and by later regimes that Orwell did not have the opportunity to observe), that the Party and its leader are always right, and to show its absurdity.

This is perhaps not obvious at first sight, since the slogan has a kind of prima facie plausibility. It looks like a template for a constructivist, utopian project and appears to express an analysis of the conditions for its success, which involve by definition controlling the future. Yet, at the same time, it's a deeply misleading and even self-contradictory slogan, like many of those the Party produces, including most famously those inscribed in huge letters on the outside wall of the Party headquarters: "War is Peace - Freedom is Slavery - Ignorance is Strength".

In his essays on the language of politics and the politics of language, Orwell strongly emphasized how careful attention to the meaning of words acts as a safeguard against the corruption of language and thus of

thought. Conversely, accepting a slogan as an indivisible whole, which has a political purpose rather than a linguistic meaning, is how ideology circulates and potentially permeates the whole texture of human life, serving not to express thoughts but to replace them. The erosion of determinate meaning, and thus also of any possible space of reasoned disagreement about questions of meaning, lies at the heart of Newspeak, the simplified, ideologically reconfigured form of English that the Party plans ultimately to impose as the only permissible means of communication, and which is already changing the way people talk in 1984 and, perhaps more importantly, the way in which they relate to language. A second appendix - also omitted in some editions - allows Orwell to state didactically and programmatically the purpose and characteristics of Newspeak, beyond the scattered elements and hints of analysis that Winston himself provides.

What enables Winston to grasp the absurdity inherent in the slogan “He who controls the past controls the future. He who controls the present controls the past.” is his own engagement with the past. The foundational moment of what will become his revolt against the Party predates the timeline of the novel. It is thus introduced and reflected on as a memory, which is deeply significant for the reasons that I have already sketched. Memory is one of the three things that the Party cannot abide. The others are decency, a characteristically Orwellian theme that runs through all of his writings, and love, a less characteristic notion that Orwell interprets in the novel in a strongly anti-utilitarian fashion. In a world in which only what is useful is permitted - and only usefulness to the Party counts - love is radical in so far as it is gratuitous. Interestingly, Orwell extends this idea in three complementary directions, albeit through hints and allusions rather than systematic exposition. The Party wages war on filial love, turning children against their parents; on sexual love, promoting chastity as a political virtue; and on beauty. Memory, decency and love are the three dimensions of what it is to be human that need to be eradicated if oligarchical collectivism is to endure.

Furthermore, Winston’s specific memory is one that underwrites the significance of memory in general, giving credence to the nagging unease at the uncertainty the past acquires when it is regularly revised. His memory is of finding, examining and briefly holding a photograph

that incontrovertibly showed a recently published Party statement to be false, by proving that certain supposed traitors were not where the Party said they were on a specified day.¹

Orwell's point here is an interesting and important one. Memory is subjectively powerful but objectively unreliable. It is very difficult to be absolutely certain, from memory alone, of all the details of a particular event, especially when it doesn't relate to one's personal experience. Memory of public events relies on history, in the broad sense, including all its archival raw material, to back it up and validate it. Even personal memories, rich though they may be in texture and emotional content, often need external validation in terms of, say, dates and places. This is why people used, in the pre-digital age, to write details on the back of photographs or below them in their albums. And if journalism is the first draft of history, as the famous quote goes (originally it seems in the words of Phil Graham, quondam publisher of the Washington Post), then the constant revision of past editions of the Times, by depriving history of its first draft, undermines the very idea of history. The political significance of memory is thus collective, not merely individual: it relies on stories, on social groups, and on institutions. Which are precisely among the things the Party works assiduously to root out.

Winston struggles with this problem throughout the early sections of the novel, before his meeting with Julia takes him on a different path of sensual revolt rather than intellectual dissidence. He is convinced, because of the aforementioned photograph, that his inchoate feeling that the Party's story is false in important respects stands on objective ground. Yet his attempts to establish a counter-narrative, with an objective baseline of what life was like before the Party's rule, founder on the fragmentary and inherently unreliable nature of his childhood memories. He has vivid snapshots of happy family moments, but no way of

¹ Strictly speaking, this inference isn't true. Because of the continuous process of alteration of documentary evidence, the photograph Winston saw was itself quite possibly a fiction. However, what it did show, minimally, was inconsistency between two different versions of the Party's fiction, which in itself suffices to undermine the narrative that the Party is always right. Winston fails to consider this possibility. As O'Brien mockingly asserts in the later torture and re-education scenes, Winston is no intellectual. Indeed, it is essential to Orwell's artistic and political purposes that he should not be. He is everyman - the last of his kind. What matters for the novel is the subjective meaning he has attached to his memory of the photograph.

adding them up to assess whether, contrary to the Party's claims, things (or at least some things) were better before. And there is of course no way, without immediate personal danger, of raising the issue with other Party members, such as his neighbours or work colleagues. With no history books or newspaper archives to refer to, and no social group within which to share and confront memories, individual memory is as beautiful, fragile and evanescent as a candle flame in a windy garden.

To compensate, he attempts to find among the Proles what is out of reach within the Party. In exchange for a pint of beer, he asks an old man, whose memories of the time before the Party would be adult, not childhood memories, whether things used to be better, or at least different from the official narrative of class oppression overcome by revolution, and receives nothing in return except a few fragmentary anecdotes. Winston's ambivalent relation to the Proles is a fascinating and complex subject, which goes to the heart of Orwell's political vision, but is outside the scope of the current discussion.² For present purposes, it suffices to note that the old man's memory, just like Winston's, is incapable on its own of grasping history, still less offering a coherent historical narrative.

Alongside memory, Winston also attaches great importance to physical objects. One way in which the past can survive, and thus exist as a present past, is in the form of objects that have escaped alteration. In the Party's world, there are few such objects. The material environment is as carefully revised for political correctness as written or recorded words are, and the natural environment is kept out of bounds for Party members precisely because it is less capable of revision. As far as I know, there is no reference in Orwell's writings to his anti-modernist contemporary J.R.R. Tolkien, who in his non-academic work had published only *The Hobbit* in Orwell's lifetime and was very far removed from him in political and intellectual terms. But the fundamental idea that nature can be destroyed but not controlled - which is central to the *The Lord of the Rings*, notably in the form of Tom Bombadil and the Ents - is one that Orwell sympathized with and explicitly articulated in a number of his writings, notably the 1939 novel *Coming Up For Air*. It reappears in

² I addressed it in more detail in "Le peuple d'Orwell", *AgonE*, n° 45, 2011, p. 49-79, coauthored with Romi Mukherjee.

Nineteen Eighty-Four as Winston's dream of a "golden country", which becomes reality when Julia and he manage, occasionally, to escape to the countryside.

Yet some objects survive, perhaps because they have escaped the Party's control - which is of course what Winston wants and indeed needs to believe - but perhaps, as the reader comes to realize, because the Party has used them, maybe even deliberately made them, to entrap him. Two objects take on great significance in the novel. The first is the notebook, with a soft leather cover and beautiful cream paper, in which Winston keeps a diary, written with a real fountain pen, which gradually becomes a collection of somewhat random, and occasionally automatic, musings. By objectifying memories in written form, Winston is quite consciously trying to stabilize them, to give the past the material present reality that the Party denies it. But he also has an aesthetic, emotional response to the notebook, which he values because it is beautiful, because it exists for its own sake - even if no one ever wrote in it. In a world in which everything is ugly and utilitarian, and in which utility is furthermore defined in purely political terms, every object that can exist without purpose is at some fundamental level a threat to the Party. And the Party, as Winston grasps, knows it very well.

This point applies even more to the second object, which is or seems to be an antique paperweight, in which a piece of coral is embedded. Whether it's genuine is uncertain. The novel makes no comment on the matter, but since the antique dealer turns out to be a member of the Thought Police, there is significant room for doubt. But what matters for the story is what the paperweight means to Winston, who has no doubt as to its authenticity. What it means is beauty, which is inseparable from absence of utilitarian purpose. It therefore signifies, and serves as a metonym for, a past in which such objects could be created, and therefore as a token of the presence of that past even in a world that seems to deny and negate it. That the paperweight is deliberately smashed by the Thought Police when Winston and Julia are arrested poignantly encapsulates this web of meanings that Winston has spun around the object. At the same time, of course, the incident expresses the fragility of that web, in so far as it exists only in Winston's mind, without external warrant. The paperweight is mute and has travelled through

time undocumented (assuming it's authentic, as Winston believes). It's impossible to determine when and where it was made, by whom, who previously owned it and what it meant to them, or what possibly unintended purposes it might have been put to.

The past, in other words, as Winston discovers but perhaps never fully grasps, cannot be made present simply by the existence now of things (photographs, notebooks, paperweights) or people that existed previously. We are often confronted by enigmatic traces - archaeologists perhaps particularly so - that lie or stand mute before us, inviting interpretation while offering no basis for it. It is indeed a salutary experience to be confronted with things we can't make sense of, so long as we can accept their unspoken demand to be valued in spite of their inscrutability. But what Winston faces is a world in which few traces remain and all of them escape interpretation, because the Party's negation of history erases even the possibility of an interpretative framework.

It is from the limitations of these ultimately futile forms of engagement with the past that comes Winston's realization that the slogan is deceptive, just as the Party's other slogans are. In the Party's world, the past is not "controlled": it is erased precisely because it cannot be controlled. And as we shall see, the same is true of the future.

Recognizing the past as past means recognizing its inalterability, its "objective" nature, as Orwell strongly argued in a number of essays the implications of which are implicit in both the conceptual and narrative structure of *Nineteen Eighty-Four*. His point was not, of course, that the past is fully known or immune to reinterpretation. On the contrary, it is the limits of knowledge and the provisional, contestable nature of interpretation that mark the past as something more than what we think or say it to be. As Faulkner famously said, the past isn't dead - it's not even past. Which means, conversely, that the past can be placed safely and definitively in the past only by being erased - which therefore allows it to be denied as past. This may seem paradoxical, since it appears to undermine Orwell's own emphasis on the "objectivity" of the past. I think, however, that he's best understood not as making an epistemological argument but as asserting a fundamentally political point. The past is objective in so far as it is an object of knowledge rather than

something used to serve a political purpose. It is in other words the instrumentalization of the past that Orwell is drawing attention to and arguing against - and indeed satirizing it by a *reductio ad absurdum* in which a fully instrumentalized past would simply cease to exist as past.

By contrast, recognizing the future as future is recognizing its radical non-existence - the fact that it exceeds control beyond the trivial, short-term instrumental predictions embedded in direct manipulation. I can plan a lecture in a certain way - changing my immediate future, and that of my audience, over a couple of hours - but that's a very limited scope of prediction and control, and depends on a radical narrowing of horizons defined by the confines of the lecture hall, or its online equivalent, and by the shared notions of what constitutes a public lecture. And even then, it's obviously imperfect. Many things can go wrong - from loss of Wi-Fi connection to loss of voice, and much else besides - and one of the skills one has to learn, as in any professional activity, is to improvise in the face of the unforeseeable. Similarly, one shapes a partial, immediate future each time one throws a ball, flips a switch or books a ticket. Clearly, however, these acts of micro-control do not control "the future". They simply make some small aspects of it present, and cannot be extrapolated, scaled up or generalized.

All of which leads Winston to a striking observation, which deserves to be quoted in full.

Every statue and street building has been renamed, every date has been altered. And the process is continuing day by day and minute by minute. History has stopped. Nothing exists except an endless present in which the Party is always right.

Contrary to the official slogan, the past is thus not controlled - it is erased.

The erasure of the future may, however, seem less obvious, especially as Orwell gives much less attention in *Nineteen Eighty-Four* or in his other writings to the future than to the past. Nonetheless, what he does say is consistent with the notion of erasure. What may seem contradictory is that, in the novel, many aspects of the Party's plan for society are ex-

plicitly constructive: the generalization of Newspeak and the abolition of the orgasm are two specifically mentioned. Yet Winston observes, while still in rebel mode, the decline of technological progress - except, he notes, in certain narrow areas of military importance. When given access to the banned book - Goldstein's Theory and Practice of Oligarchical Collectivism - he understands that the whole purpose of the revolution, learning from earlier cycles of revolution and counter-revolution, was to "stop the pendulum", as Goldstein puts it. In other words, to end history, not just in the limited sense popularized by Fukuyama, but in two more profound ways. On the one hand, it is the very idea of history as a discipline, as a way of organizing knowledge about the past, that is negated. On the other hand, and as a consequence, history is negated as process. Beyond the full realization of IngSoc lies - nothing. Just as the past is absorbed into an "endless present", so is the future, which in turn shows what is true in the Party's slogan: how one relates to the future is intimately entangled with how one relates to the past. Once captured, in his conversations with his fantasy figure, mentor and torturer O'Brien, Winston is given a dramatic statement of this future as endless present.

If you want a picture of the future, imagine a boot stamping on a human face - for ever.

There is an element of satire here, of course. Indeed, O'Brien is a fundamentally satirical figure, capturing Orwell's ambivalent relations both with intellectuals and with violence. Orwell is underlining the absurdities of a certain mode of utopian thinking by the dystopian trope of the ultimately undesirable future. Utopia, when viewed as a state of perfect organization for a community, is essentially an eschatological fantasy - one in which, all ends having been achieved, there is nothing left to do. One in which humanity has essentially abolished itself by supposedly realizing itself. Thus, the satire also shows the lie - or the doublethink - at the heart of the Party slogan. The future is indeed no more controlled than the past. It is abolished.

This point gives rise to an interesting paradox. An eternal present in which nothing happens, a system in a state of maximum entropy, is the ultimate form of sustainability in the strict and literal sense of the word.

Yet, at the same time, it is a nightmare - from a human perspective, obviously, but also in terms of ecosystems and their characteristic processes. Life is negentropic, combining information and energy to produce order against the inherent thermodynamic tendency of systems to become disordered. Of course, this literal sense of “sustainability” is not the one normally used in discussions of, say, sustainability science. On the contrary, the issue there is to sustain the characteristics of complex systems in dynamic equilibrium, fully recognizing that these involve constant change. However, they also involve metastability - not perhaps prediction and control, but at least a fairly well-defined envelope of possibilities. And indeed, if they did not, the other dimension of sustainability, as applied not to systems but to action that affects them, would make little sense. From this perspective, sustainability is understood as a criterion for choice between alternative policies or interventions. In the absence of any capacity to assess the possible outcomes of a particular course of action, the consequentialist lens becomes inoperative. What is left is a possible deontological framework that may be very powerful ethically and conceptually, e.g. in terms of rights of natural entities, but no longer corresponds to the intuition of sustainability as something of which there can in principle be a “science”.

In this sense, freeing sustainability from stasis is perhaps the basic Orwellian thought about sustainability. It takes seriously the satirical thrust of *Nineteen Eighty-Four*: if the condition for the past not to be erased is to accept that the future is radically open, then sustainability cannot be, in the conventional sense, a planning framework. It also chimes with Orwell’s admittedly scattered remarks about environmentalism which, as noted above, are fundamentally anti-industrial, on both aesthetic and moral grounds. Orwell observed fundamental transformations that he felt to be negative, because they destroyed what was valuable in the past - irreplaceable things of beauty - thereby undermining their own material and symbolic conditions of reproduction. This thread runs from the inscription on coal miners’ bodies of their role as the “grimy caryatids of industrial civilization” in *The Road to Wigan Pier*, through the pool of George Bowling’s nostalgic memories in *Coming Up for Air*, to the tasteless food and ugly cityscapes of *Airstrip One*. He also made notoriously scathing remarks about the environmentalists of the 1930s, whom he regarded as cranks, but that doesn’t affect the broader point. Yet,

while deeply conservative in many ways, Orwell was also acutely sensitive to the fundamental inhumanity of a changeless world in which, for most people most of the time, life would be merely an endless present of misery and drudgery, enlivened only by moments of love and snatches of song. It is to that extent true to Orwell to say that the objective reality of the past and the imaginative openness of the future are intimately and organically connected. And going slightly further, in Orwellian mode rather than being strictly true to Orwell's own thinking, sustainability is necessarily of a future still unwritten, anchored in a living past. To adapt the Party's slogan: "he who can live with and through the past can open up possibilities for a future worth living".

This point is not in itself original. It has been extensively argued in discussions about heritage and its meanings and uses. It underpins the idea that the capacity of human communities to adapt to contemporary challenges depends crucially on their ability to make sense of themselves and of their past. In Oceania, no one has anything to look forward to because no one has a past to build on. By contrast, a sustainable world that is not merely a static, endless present allows individuals and communities to look forward to possibilities from the vantage point of a lived past. Colloquially, something "looked forward to" is desirable. But it's equally important, in the context of discussing sustainability, to be able to "look forward to" - in the broader sense of "anticipate" - undesirable futures. Not just to avoid them, though that may sometimes be possible and even necessary, but also to make sense of the present that makes them possible.

There is a growing literature on the importance of societal and/or ecosystemic collapse in interpreting the present and imagining alternative futures. This body of work has three main strands, two of which appear problematic from the perspective sketched in this article. First, collapse can be mobilized as a predictive framework, based on scientific projections of various kinds, that sets the challenge of planning survival - or perhaps even dismisses the possibility of survival. What is problematic here is the prediction, which underplays the deep uncertainties involved in any large-scale transformation. Nonetheless, survivalism, in a wide variety of ideological forms, is an increasingly influential mindset, with real practical consequences. Secondly, collapse can be mobilized as a

control variable: a risk to be managed by deliberate strategies to avoid it. This is very largely the mainstream policy position, including at intergovernmental level. By taking full account of scenarios in which societal and ecosystemic collapse could occur, we can supposedly define a planning framework to avoid collapse and thus ensure the sustainability of what currently exists. And what is problematic here is very similar to the first strand, because planning and prediction - even in the form of apocalyptic prophecy - are ultimately variants of the same mindset, foreclosing the unknown possibilities that will emerge from a future that by its very nature can never be fully present.

The third strand, less prominent but hardly unprecedented, emphasizes collapse as a feature of the present that calls on us to re-examine the present as well as the lived past. If the virtualities of collapse in the present can be grasped, interpreted, made sense of, using the rich resources of sustainability science, then a transformed present will in turn open up possibilities for alternative futures. Collapse, in other words, is not an external threat but an internal condition, one that points in the direction of an ethics and aesthetics of fragility - not as weakness, but as mutability of beauty. And Orwell reminds us, through his essential idea of decency, that fragile and easily lost beauty expresses something essential about humanity, understood in terms of what is human as well as in terms of what is humane.

The relation of past, present and future is thus not one of control, nor of erasure, but of imagination, co-construction and emergence. The challenge is how to make practical sense of this relation, or set of relations, in areas such as landscape, territory, identity, artefacts and memories, new infrastructures and planning processes, innovative practices and technologies, heritage, performance and representation.

The past exists objectively as raw material - buildings, landscapes, texts, stories, images... As Orwell strongly emphasizes, there is a need, a yearning, indeed a duty, to preserve this raw material, to enhance and enrich it, to make it available for study and reinterpretation. However, once one recognizes that the past can be kept alive - or brought back to life - only through processes of interpretation and appropriation, tensions arise. On what conditions is a living relation to the past true to

the past itself? How can alternative, competing, perhaps incompatible interpretations of the same past coexist without undermining the presence of the past as past? Avoiding erasure is thus not the only challenge in making the past present. There are more subtle forms of distortion that all the relevant scholarly disciplines - history, archaeology, palaeontology, philology... - are sensitive to and, given societal pressures, need to offer safeguards against.

The most common form of such (often well-meaning) distortion is failure to accept that the past includes past interpretations of it - including the embarrassing or even politically offensive ones that we'd rather move on from. But even if one accepts the kind of holistic approach to the past sketched here, it raises enormous practical difficulties, which are very familiar to all heritage professionals. The past does not sustain itself. As Orwell stresses in *Nineteen Eighty-Four*, it decays, degrades, mutates and transforms itself, in its tangible as well as its intangible manifestations. It must be sustained as living past. To take a very well-known example: how should one rebuild a severely damaged cathedral? The cathedrals of Strasbourg and Reims, in France, were both badly damaged during the First World War, and were rebuilt in the 1920s and 30s. The choice was made to replace the original timber roof beams with concrete, partly for practical reasons, related to structural properties and availability of building materials, and partly as an aesthetic and even philosophical choice of modernity. When Notre-Dame cathedral in Paris was badly damaged by fire in 2019, the same question arose, and an opposite choice was made to rebuild the roof as it had been, despite great practical difficulties in sourcing the right kind of timber. Both options are ways of incorporating the past into the present, and thus giving it life, but the symbolism is very different. Is either right or wrong? Does it matter at any fundamental level? Choices of a similar nature, albeit typically at much smaller scale, are a constant, daily challenge to heritage managers everywhere.

And all of this matters for the future as well as the past, in line with the revised version of the Party's slogan, eliminating the fantasy of "control". There can be no coherent approach to sustainability that does not consider and in some way - however pluralistic and provisional - answer the question: sustainability of what? The purely formal answer is fairly

obvious: sustainability of what deserves to endure, of what is valuable, of what might otherwise be lost. But that is not enough to specify what exactly is deserving, valuable or fragile - still less to adjudicate the inevitable quarrels about the specification. Nonetheless, it is hard to see how any answer, however imperfect, could fail to be anchored in the living presence of the past, which defines a community and its members by situating it in time and locating it in space. Identity and territory, in other words, come together as the matrix within which questions about what is to be sustained can cogently asked - and with the help of sustainability science, as an understanding of systemic interactions, receive at least reasonable, practical answers. To put it simply, one condition of sustainability looking towards the future is that the past be sustained - a point that, interestingly, is absent at least explicitly from many canonical definitions, e.g. that offered by the 1987 Brundtland report *Our Common Future*.

Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. (§ 27)

Of course, the “needs of the present” are anchored in the past, and in the identity and territory that the past has shaped. But specifying what that entails for a full understanding of the challenges of sustainability means grappling much more explicitly with history and heritage - just as our relation to future generations requires recognition of how limited is our ability to assess what their needs might be. Emphasis on community-based practices as essential components of action towards sustainability stems from such recognition, for instance in the design of the international BRIDGES sustainability science programme, anchored in the environmental humanities and attached institutionally to UNESCO’s Management of Social Transformations programme.³

What this means is that, whereas the only way to control the future is to erase it - and the only way to try to control it is to colonize it -, the only way to sustain it is to open it, as a living future just like the living past. In these terms, the future is effectively the present envisaged as the only place where we humans can act, imagine, create, build, dream...

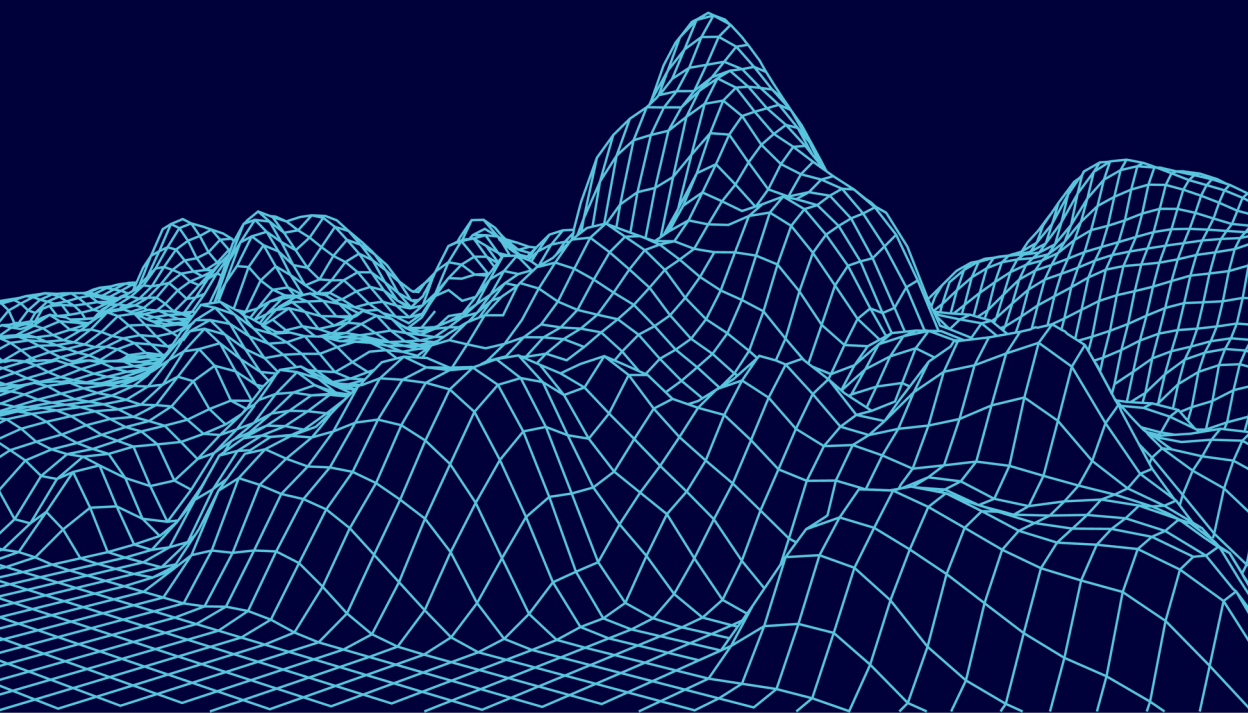
³ For further information on BRIDGES, see <https://bridges.earth/>.

- but not the only place in which we live. Imaginatively, we occupy the past and future as lived present experience, from which the future emerges, not unconnected to our plans and desires, but never determined or controlled by them, whether individually or collectively. And sustainability is, to this extent, best seen as sustainability of lived past and lived future - in other words as inscription in the present of the uncontrolled timeline through which life achieves continuity and meaning.

I have been emphasizing imaginative and narrative constructions, but as the example of cathedral building above shows, material issues follow the same pattern. With respect to technologies and infrastructures too, the same questions of lived past and future arise. Building codes, water management systems, forests and their commercial exploitation, energy production, transport... all of these, and more, use the raw material of the past - including the distant geological past of the planet. And by using the past, technologically designed and deployed infrastructures transform it, make it present, and leave it to the future in altered state, thus shaping future conditions of habitability, flourishing and ongoing emergence.

The fundamentally transformative character of human existence may appear to give rise to difficulties in this regard. The slogan “take nothing but photos, leave nothing but footprints” has become widespread in the language of sustainable tourism, and it dramatizes the question of traces in general. Is it OK even to take photos? The question can be, and has been, raised - especially now in the social media age. Online popularity has literally destroyed certain selfie sites, and even where the destruction is not physical, a world in which everyone is visually familiar with everything would risk being one without wonder, surprise or joy. Maybe even photographs are too much to take. And footprints in large numbers are, of course, more than some fragile ecosystems can bear - a problem that is it seems becoming pressing as high-latitude tourism expands. So maybe no trace is actually permissible. There’s an odd symmetry in this regard between the temptations of techno-optimism and voluntary extinction. One accepts no trace from the past. It believes that, to us, nothing is impossible. And one aspires to leave no trace for the future to uncover. Yet, inescapably, we take the past as a whole, and by digesting it make it living. And we leave the present as a whole, which is always

incipiently the living future. The bridge between taking and leaving is thus value - what we add, or at least what we do not subtract. And we can't measure that if we don't know what was, is and will be valuable. Which is why, without the humanities, there can be no sustainability.



COMPETING PERSPECTIVES AND AGENDAS IN STONE AGE ARCHEOLOGICAL RESEARCH

B*om dia!* First, let me give a word about myself as a digging archeologist specialized in Upper Paleolithic human adaptations along the Atlantic façade of Western Europe, together with some experience in Middle Paleolithic, Mesolithic and Neolithic—mostly in caves and rock shelters—over the last 5 decades. I have loved working in a discipline (since age 14) that allows one both to work outdoors, with my hands and brain, solving practical problems and having intimate contact with the earth AND to engage in pure scholarship, teaching and student mentorship. I regard myself as a non-specialist organizer of interdisciplinary research projects involving wide varieties of archeologists, geoarcheologists and bioarcheologists, but with particular personal interests in lithic artifacts, archeofaunas and chronostratigraphy. As an excavation director, I regard myself as a hands-on archeological organizer (“impresario”), committed to using the record better to understand changes and variations in human behavior throughout the course of the Late Quaternary, and always open to exploring new avenues for obtaining information relevant to answering questions about past environments, resources and human adaptations. I have sought to follow a highly collaborative model in the study of sites and regional settlement-subsistence systems, and I produce, promote and facilitate publication of the basic descriptive record and analytical results (including both “standard” and “innovative” ones). The remarks that follow are based on my personal experience of 50 years of conducting excavations (and limited surveys) in Paleolithic and Mesolithic sites in Spain, France, Portugal and Belgium, as well as my familiarity with the state of research in both Europe and (as a long-time professor and editor of a traditional, international journal of general anthropology in New Mexico) the United States. My observations and opinions are certainly not representative of the complete situation, biased as they are by my own limited and perhaps at times skeptical

view of things. In particular, my role as co-director of the El Mirón Cave Prehistoric Project in Cantabrian Spain together with Manuel González Morales since 1996 (27 years now!) very much colors my perspective on the state of Stone Age research in Europe. Please pardon my inclination toward pessimism, which may be somewhat excessive, especially in the context of this inaugural lecture.

The key role of excavation

Naturally, surface survey and small-scale subsurface testing or coring are important tools in archeological research, especially to locate sites, to reveal and analyze regional settlement patterns (albeit often at low levels of chronological precision), and to create cultural heritage registries for the sake of preservation and damage mitigation. Together, these methods can be particularly useful in the study of relatively recent periods in regions with good surface visibility (such as in the case of the arid US Southwest) and in regions where geomorphological processes have laid bare extremely old surfaces (such as in the Rift Valley of East Africa). While lithic artifacts are generally present in open-air loci, the preservation of faunal and botanical remains is often uneven or nil, and the possibilities for the mixing of items of greatly differing ages can be great in surface contexts. However, in many cases, such as the Upper Paleolithic of Southwest Europe, the archeological record is best preserved from erosion, is deeply buried in rock shelters and caves, and generally includes chronometrically datable bioarcheological remains, and the distributions of both artifacts and other remains may be more or less “sealed” in place (admittedly as palimpsests), especially when sedimentation rates were high. This is true even if Stone Age “Pompeii” are rare in both cave and open-air settings (with notable exceptions of the latter including the famous site of Pincevent and other Upper Magdalenian sites in northern France, western Switzerland and the German Rhineland).

While test pits (often only about 1m²) are useful to obtain evidence for the presence of archeological materials, to determine stratigraphic sequences (at least in specific, small areas of sites), and to obtain samples for dating and other analyses, they can provide very limited and potentially highly skewed representations of site contents and, thus, of the full range of human activities. Although it is very rare to be able to excavate

a Stone Age site completely or even in very large part (a spectacular example being the Mousterian site of Abric Romaní in Catalonia), the opening up of large areas is essential to gather information about the spatial distribution of artifacts and faunal remains, to stand a good chance of finding features such as hearths, pits or burials, and basically to obtain evidence of variability within individual occupation layers interpretable in terms of the organization of space-use within sites. As we all know, modern excavation (as opposed to test-pit digging) is excruciatingly meticulous and slow, with three-dimensional plotting of most finds over about 1 cm in size, fine-mesh water-screening, photographic recording, etc., often proceeding by only a few centimeters per week (or more), especially when finds are abundant. Everything is collected under controlled conditions, which in Paleolithic sites this means including thousands of very small lithic chipping debris and bone splinters, charcoal fragments, fire-cracked rocks, etc.—not just the “formal” stone tools and large flakes, obvious osseous artifacts and easily identifiable bones and teeth. So, to be truly meaningful, excavations need to be relatively extensive and prolonged. They require substantial, sustained funding, institutional and infrastructure support, and the long-time dedication of project directors and assistants, as well as trained, conscientious dig crew members. Most importantly, projects must have overall scientifically meaningful goals to contribute to the body of knowledge about the behavior, adaptations and evolution of past humans and societies in specific regional and continental contexts. They should consciously be concerned with addressing specific questions of relevance both at the level of the site or local area and in a wider realm of scientific interest. Ideally excavation projects should generate not only descriptive publications of the basic, empirical archeological record, but also diverse specialized analyses, including theses and dissertations—this meaning the training of new cadres of researchers within university contexts. Excavations and the consequent analyses can take years or decades, and, if well done, can involve the “revisiting” of materials through additional or even new kinds of analyses and resampling of stratigraphic sections long after the end of fieldwork *per se*. It behooves project directors to stay abreast of new technologies for recording and retrieving information, new avenues and methods of analysis, new possibilities for extracting ever more detailed and esoteric information from sediments and finds, and to contact new kinds of specialists as potential collabo-

rators, while maintaining the traditional, classic goals and standards of excavation, analysis, publication and collection curation and while fully recognizing the ethical obligations of the destructive nature of archeological fieldwork.

The conundrums of excavation

Just as the profession is coming to grips with how complex, expensive and time-consuming—and ethically critical--“modern” excavations should be, it is being faced with several conundrums and partially conflicting agendas. In many countries, it seems, budgets for archeology are being cut (or remain flat in the face of inflation), for both academic positions (notably tenured professorships) and primary research. In many cases, university jobs are being eliminated, downgraded, and made ever more onerous in terms of teaching and administration load, on top of the accelerating “publish-or-perish” demands. Publication of research results in “high-impact” international (i.e., English-language, semi-monopolistic, multinational corporation-owned) journals are increasingly expected by university administrations and national funding agencies and ministries, to the detriment of traditional national, regional, university or professional society journals. This tends to favor short-term testing of sites with quick results and exaggerated claims of importance from very limited fieldwork, as opposed to more substantial, substantive and thoughtful presentation of significant amounts of data that are thoroughly analyzed in the context of culturally meaningful research. In addition to budget cuts, academic job insecurity and an emphasis on quick, metrically “impactful” publications, there often seem to be increasing bureaucratic obstacles to the conduct of archeological excavations in many parts of the world. The permitting process is often getting longer and more onerous, and, in some cases, it has become impossible to actually dig, due to the zealous over-application of modern norms of site protection, however well-intentioned and reactive to some of the horrors of past archeological work that at times verged on looting. University accounting and legal offices sometimes make it materially impossible to conduct excavations because of increasingly restrictive regulations governing spending and liability risks. The expense of new technologies used in recording (laptop computers, sophisticated software, total stations, high-end cameras, laser-based digital imagery,

etc.), along with rising travel, lodging and food costs, can easily consume tight archeological budgets and limit the time spent actually digging and the numbers of excavators. It is not uncommon to see small, short-term excavations endowed with the latest (and very expensive) high-tech cameras, topographic instruments and computers—all for recording very reduced surface areas, short stratigraphic sections and small samples of finds during very brief field seasons. The products (granting agency and university administrators now tend to see publications as “products”) may be very slick in their graphics, but poor in actual results that really demonstrate something of transcendent interest or importance despite exaggerated claims to the contrary in the abstracts. A common phenomenon these days are abstracts for professional meetings (often poster prospectuses submitted many months in advance of the actual or on-line symposia, and even before analyses are completed) that are heavy on theoretically sophisticated generalities, but that deliver very limited results that actually support any definite conclusion. The “swan song” of publication and productivity metrics is becoming all-important in academic circles. This situation is driven by the rat race that must be run especially by junior academics seeking jobs, the next grant, teaching contract renewal, professional advancement, or tenure—all in the name of productivity and institutional justification of budgetary support from governments and private funders. I fear that these factors—financial, academic and administrative—are all combining to make it increasingly hard to conduct successful, large-scale, long-term excavations, the years-long, painstaking analyses of finds, and the traditional publication of the basic records that our discipline and ethics really require.

New methods need our excavations

Against this backdrop, the fast-moving development of new, highly technical and sophisticated analyses (especially in the biological sciences, such as ancient DNA from bones/teeth and now even dental cementum and archeological sediments, proteomics and stable isotopes) make archeological sites and their collections the much-sought-after targets (or “mines”) of researchers in highly funded, specialized laboratories and institutes in Europe, Britain and the US. While it seems ever harder to conduct substantial excavations with long chronostratigraphic sequences, broad areal coverage, and thus statistically good chances for making

meaningful or even rare discoveries (e.g., well-preserved fauna, isolated human remains or even actual burials, ornaments, portable artworks), sometimes rather narrowly focused researchers at high-profile, very well-funded laboratories are increasingly on the lookout for carefully excavated and chronometrically dated sites to obtain samples. Results can be very spectacular, published in the highest impact, international, “hard science” journals which have very strict length limits. Such articles are generally written in terse style with very technical language. The socio-economic and cultural aspects of the prehistoric humans who had created the archeological record are often all but absent from such publications. Genes and isotopes are sometimes reported with scant context and little consideration of broader implications in terms of the past human condition. Cultural aspects of the research are often confined to the bare minimum. While the archeologists whose years of work to obtain (often limited, precarious) funding, to dig, screen sediments, document and date stratigraphic sequences, and conduct artifact and faunal analyses ultimately create the sections and make the finds that can be sampled, their contributions to these “blockbuster” articles and the archeological (i.e., cultural) significance can be lost or relegated to brief notes in the supplementary on-line information. Yet, today it is this kind of article reporting on the latest ancient DNA-based reconstruction of population relationships and movements or isotopic discoveries on diet or paleotemperature modeling, that can be by far the most highly cited publication in an archeologist’s entire career—but lost as just one name in the middle of a list of scores of co-authors.

Make no mistake, such extraordinary analyses are groundbreaking, indeed revolutionary in the study of human evolution and adaptations, but they would be impossible without the tireless work of excavation, classic archeological analyses and traditional publications that generally fail to score the kinds of “impacts” or attention that these kinds of articles garner in journals such as *Nature*, *Science* and *PNAS (Proceedings of the National Academy of Sciences of the USA)*. The increasing interest in computer-enabled modeling has likewise produced many flashy publications and their authors often get cited as sources of information on human demography and distributions during particular periods (notably the Last Glacial Maximum or the time of Neanderthal-*Homo sapiens sapiens* replacement). But the models are really only as good as the archeological sites, their contents and dates, and these are the fruit not of a few

months in the computer lab, but rather of years of the primary research: excavation and traditional archeological and paleoenvironmental analyses. They also owe their genesis to the hypotheses and interpretations of archeologists deeply and broadly familiar with local, regional and continental records. While not meaning to downplay the extraordinary innovation, complexity and laboriousness of these new methodologies, sometimes it seems as if the major, but more traditional anthropological contributions of excavations that were patiently and meticulously carried out for years by many professional and student archeologists get buried or forgotten in the focus on spectacular (but minimally interpreted) results from the novel analytical studies. Archeologists must be full partners in such specialized research when lab-based experts come in search of good sites and materials to “mine”. They must be consulted and informed all throughout the process of analysis and write-up of results and interpretations, lest they end up basically just being passive purveyors of samples. It is important that the archeologists be involved in making plans for publication, including how their materials will be explicated and used in concert with data from other sites. Especially crucial are the anthropological interpretations and implications of the “hard-science” results. However, the kinds of articles in which such results are published are forced by the length strictures of the highest impact journals to be very concise and to follow the argument structure of hard-science reporting. Yet, without the excavations and all the basic research they involve, there would be no carefully dated and culturally contextualized materials to be analyzed. In such budgetarily tight times as these, funding agencies must not forget that without good-quality, substantial excavations, there will be no meaningful laboratory analyses, no matter how innovative they may be.

Who will be the next generation of digging archeologists?

A corollary to the above is that doctoral students in archeology are now increasingly steered toward or actively choose dissertation research that is highly technical and specialized, stressing laboratory analyses, rather than the primary collection and study of artifacts. Actual excavation experience—which used to involve many years of de facto apprenticeship—is harder to obtain (often perhaps for financial or life-choice reasons) and may be shortened by the need to master complex specialized

analytical methods. The amount of non-excavation, non-artifact-related training now required to do a cutting-edge dissertation can preclude obtaining a deep and broad set of field experiences so important if/when one takes on excavation directorship. Excavation is in great part an “art”—based often on experience in a wide variety of sites of different ages and geographical/geomorphological context--informed “hunches”—and it is this aspect of the profession that is in danger of extinction as academia rewards those who are specialists in highly-technical, but narrow, hard-science analytical methodologies. We must always have a central place in academic training and professional *development* of archeologists for individuals whose core interest and skills are in excellent excavation. The notion of archeological “apprenticeship” must not die, as the dissection and interpretation of sites is a very complex (and endlessly fascinating) enterprise.

Nevertheless, the education and training of a professional field-oriented archeologist must include exposure to the interpretive potential, practice—and pitfalls—of not only such more traditional subjects as socio-cultural and physical/biological anthropology, geomorphology, palynology, archaeozoology, chronometric dating, and statistics, but also newer methodologies such as ancient genomics and stable isotope analyses. The educational load gets ever heavier, but it is necessary, if digging archeologists are to be able constructively to take advantage of the capabilities of myriad analytical specialties, while doing so in an intelligent, clear-eyed manner. In addition, reasonably to deal with requests for samples from their sites, archeologists must actively continue to seek out particular analyses for the purpose of answering their own paleoanthropological questions. Archeologists must be informed, actively collaborating, participant consumers of information from specialized analyses. The adoption of the journal “impact factor” as a key criterion for the acquisition of academic employment, tenure and promotion would seem to me to work against much traditional archeological publishing, where many of the basic, descriptive, but essential facts are often only publishable *in extenso* in regional or national journals or university monograph series. Few archeologists (especially junior faculty) get to publish (either at all or as principal author) in the “highest impact” international journals that never present *in extenso* the basic, but all-important results of excavations, while tending (perhaps a bit because of inter-journal competition) to showcase spectacular new dis-

coveries and methodologies. Institutions and administrators are abrogating much of the responsibility of evaluating candidates for promotion and tenure to the (fallible) reviewers and editors of high-impact journals. Many of the highest impact journals that publish on archeological and human evolution subjects are “hard science”-oriented, so authors have to adopt the style and format of articles in the biological sciences, as opposed to a more traditional narrative style. As noted earlier, since many of the journals that are known (or at least perceived) to be the *sine qua non* for academic success are ones that stress the hard-science (often lab-based or modeling-centered) aspects of the discipline, doctoral students, post-doctoral researchers and junior faculty seem to be increasingly pushed into work that does not focus on long-term, classic excavation and artifact analysis. The consequences for the readership and financial survival of many traditional archeological journals and monographs may be dire. The agencies and institutions that fund archeological research must be persuaded that the financing of publication of the basic data in such outlets is essential (and not just the payment of outrageous “open access” article fees required by many “high-impact” journals published by the handful of dominant, for-profit, multinational corporations).

Whose heritage and for whom?

Ethical archeologists have always been at the forefront of efforts to protect sites from damage and destruction, often against fierce opposition from economic interests. Ironically, however, in many current cases, a major argument for preserving important, highly visible or spectacular sites is not so much scientific, as economic: the creation of magnets for tourism to promote rural sustainability, especially in areas where the traditional agricultural or small-scale industrial base is failing and where depopulation is happening. The justification for cultural heritage preservation -often in instances where sites had been grossly neglected or worse in the past—often boils down to supporting the transition to employment in the hospitality services sector (bars, restaurants, bed-and-breakfasts, hotels, souvenir shops). Archeological sites can become simply part of an area’s tourist offerings, albeit sometimes the principal “draws”. The supposed economic benefits of the declaration of cultural heritage sites can take precedence over the legitimate needs for on-go-

ing archeological research. Sometimes, unfortunately, once a “monument” has been declared, further archeological excavation becomes increasingly difficult or even impossible as a consequence of long, complex permitting processes that may involve multiple layers of approval or veto. A bureaucratic principle of “untouchableness” may be applied either by regulation or de facto in practice, thus hindering or preventing research aimed to use the archeological resource to increase knowledge about the society and adaptive system that created the monument in the first place. There can arise the danger of “freezing” monuments into outdated interpretive schemes, rather than places that can be responsibly “queried” by new research with innovative theoretical approaches and analytical methods. In many cases the balance has swung away from scientific research and toward the creation of static monuments whose “real” purpose from the political standpoint is to bring in tourist spending.

Reasonable compromises must be struck to permit, facilitate and fund well thought-out, meaningful, innovative research on sites that have cultural heritage protection, while provided mechanisms for frequent updating of accurate public interpretation displays in visitor centers and local museums, as well as seriously addressing the criticisms and suggestions of descendent native communities. The “stories” told to the public at heritage sites must be subject to revision as research advances. This means that under enlightened administrative control, research on heritage monuments must responsibly continue and evolve, rather than fossilizing their interpretation into the unchallenged dogmas current at the time of their discovery and early excavation. While large sums may be spent on visitor centers for monuments, the growing needs of excavation, analysis, curation and publication must not be ignored, lest research suffer in the quest to create local economic engines based on tourist “attractions”. Of course, active archeological excavations should be made accessible to tourists whenever possible, with dedicated, qualified guides or the archeologists themselves providing explanations of how the research is done and what is being learned. But monument declaration should not mean the death knell of excavation where it is scientifically justified. The important results of careful excavation and multidisciplinary, scientific analyses must be stressed in interpretive displays and pamphlets written for the public, rather than emphasizing just spectacular finds. Education of the public about the key role of ar-

cheological research in learning about the human past in environmental context must be a key role of cultural heritage sites. This should involve the relevant archeologists themselves, as we must happily combat the “Indiana Jones” image in popular media.

In addition to these considerations, notably in North America and Australia, the rights of indigenous inhabitants (i.e., pre-colonization “First Peoples”) *vis à vis* archeological sites that they claim as their ancestral heritage, are increasingly being taken into consideration in decision-making about excavation permitting, even on lands not currently titled to native groups. At best, consultation with indigenous people and polities can assist and enrich the work of archeologists, but at worst (from the standpoint of research) requirements for approval by descendent groups (however defined) can complicate or even prevent research. Mutual understanding, delicate negotiation and good-faith compromise are now essential in many geographic and cultural contexts if archeological excavation and analyses are to continue. Of course, the debates over the excavation of human remains, associated burial goods and sacred objects are particularly fraught and archeologists, who must be respectful of alternative views of the record, are often caught in the middle. They can be pulled both by the sometimes opposed scientific, professional and institutional need to conduct research and by the ethical obligation to recognize the rise of long-overdue imperatives to right historical injustices and the frequently callous activities and attitudes of past generations of archeologists.

Museums: warehouses of antiquities, showcases for the spectacular, or research centers?

Another aspect of the archeological enterprise that is subject to strongly conflicting perspectives and agendas is the museum world. Aside from the growing cry for repatriation of illegally or at least unethically acquired artifacts, museums and thus archeologists are having to deal with the conundrum of how to balance the roles of perpetual, pristine conservation versus valid, dynamic research. Very often, once artifacts and faunal remains are accessioned into museum or archeological repository collections—as generally required by laws—they become subjected to regulations or simply practices and conditions that make it difficult or impossible for further analysis to be conducted either by the archeolo-

gists themselves or by specialists in numerous specialized fields of study. The unfortunate effect of an ethos of absolute preservation may mean that finds can become “dead” objects, prevented from yielding new information, especially as novel methods (ancient DNA, stable isotopes, etc.) are invented. Even if such methods are minimally destructive, museum curators often adhere to the primate principle of conservation as the rationale for denying sampling requests. Furthermore, many smaller, poorly funded museums lack research labs, equipment, or even space and reasonably long hours of operation to allow outside researchers seriously to study the materials they curate. Even the original excavators may find it hard or impossible to get their own finds back on loan for analysis in their academic labs.

A balance needs to be struck between the justifiable need for careful custodianship and the need for continuing research as science advances. Blanket denial of permission to sample or to access collections in the (sometimes unthinking) name of preserving the cultural heritage is tantamount to hindering the ongoing, dynamic interpretation of the past. If museums are not able to provide good facilities and conditions for time-consuming analyses, agreements between them and the archeologists’ universities should be reached that would allow for long-term curation of collections at the latter, thus making the materials in need of study available by both specialists and students working on theses and dissertations. Unfortunately, inter-institutional rivalries, politics and regulations can sometimes hinder development of reasonable arrangements for long-term study of collections in academic settings.

Finally, museums—as public institutions often funded in whole or in part by government money—are torn between their curation and research roles and the perceived need to provide spectacle, to be draws for tourism, especially strong in this post-industrial, leisure-driven age. Museum directors, like archeologists, must try to balance the political pressure to “put on a show” that will boost the local economy with the traditional roles of both safeguarding and analyzing collections. The risk of the spectacular is one of over-simplifying or misinterpreting the past. At its worst, museology (like popular archeological writing) can serve prejudiced or even xenophobic purposes. Museum exhibits must avoid mis-using the archeological record to promote propagandistic stories about the past that distort racial, ethnic or regional “traits” and identities. When governments fund archeology and museums, there may be times when

politicians (for their own purposes of self-aggrandizement or economic benefit) push for the creation of separatist and supremacist tales based in questionable or totally false interpretations of the past. We have only to consider the history of the 20th century to see how archeological research, teaching and museology can be horribly mis-used. We must be vigilant about how our discoveries and analyses are interpreted in museums, television, textbooks and the Internet. We must insist on factual accuracy and appropriate circumspection about the appearance of definitive interpretations. We have ethical obligations to consider how our work is used and sometimes abused.

Conclusions

I fear I may have been rather pessimistic in my assessment of some of the many serious problems that face traditional, excavation-based archeological research today. As a Paleolithic prehistorian within the interdisciplinary subdiscipline of paleoanthropology who works in Europe, I have not had to deal with issues of indigenous consultation, research strictures or even permit vetoes that have long faced my Southwest archeology colleagues. I have relied on my Spanish, French, Portuguese and Belgian colleagues to obtain the necessary authorizations to excavate in their countries and to arrange for the ultimate curation of our finds. However, as a digging archeologist who has directed or co-directed many excavation projects and as a professor of archeology, I have confronted and still deal with many of the kinds of dilemmas that I discussed here. There is no doubt that the current situation for archeologists is far more complex than it was 50 years ago. The explosive development of new methodologies (notably computer-enabled modeling, archeogenetics and stable isotopes), the revolution in the for-profit publishing of “high-impact” international journals that in turn have become the metrics-driven, administrator-imposed arbiters of archeologists’ academic careers, increasing bureaucratic permitting hurdles and research regulations, budget tightening (at least in the US), the rise of “cultural resource management” as a “business-model” rival to traditional “pure” research, the increasingly economic justification for cultural heritage designations, demands for premature museum accessioning of collections that subsequently become hard or impossible to keep studying, the changing trends in student dissertation research choices toward narrow

specialization, the political push to exploit archeological sites and spectacular (media-friendly) finds in part for electoral purposes—all these have happened during the years of my career.

Our profession is beset (or blessed?) with many challenges, but our goal to document, interpret and suggest explanations for past human adaptations and evolution remains central. Conscientious, meticulous, theoretically justified excavation is at the heart of the archeological enterprise. What encourages me is the knowledge that there are many young archeologists who love the combination of serious fieldwork, rigorous analysis—both classic and cutting-edge—and dedicated teaching and mentorship. You have many new analytical tools at your disposal, but these must be used in the context of traditional archeological research to help answer significant, broad questions about the evolution of humans, our bio-cultural adaptations, societies and cultures. Thus, I salute and encourage you, as you undertake your doctoral work in the new doctoral program in Heritage, Technology and Territory. *Boa sorte! Muito obrigado.*



A formação proposta pelo DPTT distingue-se pelo seu carácter inovador. A aposta no modelo de ensino a distância poderá, com certeza, assegurar condições otimizadas para a constituição de uma nova comunidade de ensino e investigação, sustentada pelo dinamismo e a criatividade de estudantes nacionais e estrangeiros. O projeto científico do DPTT abre novas perspetivas de investigação no cruzamento entre história, arqueologia, tecnologia e os estudos do património. Este novo programa de doutoramento propõe articular várias abordagens disciplinares, questionando as fronteiras entre disciplinas e oferecendo aos alunos um percurso rico e diversificado, com abordagens teóricas e práticas. A ambição presente e passada do Departamento de História, Artes e Humanidade (DHAH) da Universidade Autónoma de Lisboa e as experiências acumuladas ao longo dos anos, de colaboração com o Instituto Politécnico de Tomar, encontram neste programa um prolongamento natural.

DOUTORAMENTO EM PATRIMÓNIO, TECNOLOGIA E TERRITÓRIO

<https://autonoma.pt/cursos/tecnologia-territorio/>

The programme proposed by the DPTT is distinguished by its innovative character. The commitment to the distance learning model can certainly ensure optimum conditions for the constitution of a new teaching and research community, sustained by the dynamism and creativity of national and foreign students-. DPTT's scientific project opens up new research perspectives at the intersection of history, archaeology, technology and heritage studies. This new doctoral program proposes to articulate various disciplinary approaches, questioning the boundaries between disciplines and offering students a rich and diverse path, with theoretical and practical approaches. The present and past ambition of the Department of History, Arts and Humanity (DHAH) of the Autonomous University of Lisbon and the experiences of collaboration with the Polytechnic Institute of Tomar, accumulated over the years, find in this program a natural extension.

PHD IN HERITAGE, TECHNOLOGY AND TERRITORY

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