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3

A Terrifying Silence

Spaces of Research from Discovery to Surveillance

The eternal silence of these spaces terrifies me.
Pascal

On a sweltering day in September 1962, President John F. Kennedy addressed the students and faculty of Rice University in Houston, Texas, where he held a position as an Honorary Visiting Professor. His lecture that day was extremely important. Among other things, it centrally set out to affirm the place of the University in scientific research, and specifically in space exploration. In then committing the United States to putting a man on the moon and returning him safely to earth within the decade of the 1960s, Kennedy did many things. He invoked the spirit of the early pioneering explorers, thereby tying this exploration of outer space to a foundational myth of the geopolitical formation of the United States. Going to the moon was aligned with the earlier earthbound onwards push westwards that claimed more and more land, as the early country formulated its boundaries through the ‘discovery’ of new worlds. The history of this push westwards is controversial, of course, related as it is to the issues around ethnic displacement of peoples who inhabited the land; but it was already controversial even in the 1960s, for this and for other reasons. As we will see, those reasons had to do with a negotiation between the demands for introspection (protecting US internal interests) and for further expansion of US ideas and ideologies. The determining factor is an attitude to space.

Kennedy reminded his audience about the Cold War rivalry with the USSR, and stressed that this scientific research – based upon the search for the true – was one that was tied not only to a politics but also to a way of life – the search for the good; and, in some ways, the very continuity of the United States itself depended on the nation assuming the leading role in the research-race. He replaced the direct violence of crude military confrontation with a demand for technological and scientific supremacy;

and, in this, he both aligned science with war while simultaneously arguing that scientific advance was precisely a way of averting war.

In all of this, Kennedy used the idea of open expansive *space* – evoked in terms of aesthetic beauty – as a way of reaffirming an identity tied firmly to *place*: the United States; within the United States, Houston; within Houston, Rice University. In all of this, then, we see Kennedy affirming the links among the search for the true, the good and the beautiful that I have suggested as the core first principles of the University as an institution; and, most importantly, he explicitly and successfully ties these ideals to the activities of University research.

Space becomes place and identity when it is occupied, inhabited and given a character: the artificial flag on the moon bears the marks of the very national identity or national character invoked by Kennedy's speech. The fact that it is made to look as if the flag is blowing in the wind, a wind that the moon cannot have, is testament to an awareness that aesthetic beauty and the sensation of a living and organic experience is thought to be of great importance: the idea is that the national identity *lives* there, and it does so as well and as fully as it does *here* on earth.

The speech that day at Rice placed the idea and the reality of space at the centre not only of a national identity, but also at the centre of an idea of progress based upon research, and upon research that was to be placed at the centre of the University as an institution. Indeed, the University was identified as the primary institution for the advancing of research as such. It is worth considering, now some half-century later, how space – as idea and as reality – has somewhat shrunk or narrowed in our contemporary University world. In these rather anorexic transformations and conceptual or imaginative shrinkages, we will see that our ways of thinking about space are related now to forms of thought that can actually damage scientific research – and indeed, all other forms of research – in our Universities; and this precisely at the moment when governments in the advanced economies are claiming that they put science and scientific research at the heart of government policy.

In Kennedy's speech, space becomes almost a metaphor for the very fundamental principles of research itself. He stresses that the outcomes of space and lunar exploration are uncertain, and that we will be seeking answers to questions that we cannot even begin to formulate: things undreamt of in our philosophies, as it were – or in that less eloquent modern formulation, 'unknown unknowns'. In short, the space-race is predicated upon a free experimentation, where we do not have the very specific questions that would contain within themselves the seeds of their own answers. This is, as it were, the original 'blue-skies' research.

Just one year after Kennedy advanced these ideas, Harold Wilson committed the UK to a rather similar academic and research-oriented priority, arguing that progress for the entire social realm – the good, in other words – would be achieved by the deployment and exploitation of our research communities passionately burning with the ‘white heat’ of science and technology at the heart of our own government’s policy. Not only that but, by 1965, Wilson and his then minister for the arts, Jennie Lee, had committed the nation to another critical moment of democratic expansiveness with the development of plans for an ‘Open’ University, the very name of the institution being a paean to what would now be called ‘widening access’, and a tacit hymn of praise to the generosity of space and its exploration. This is edifying, exciting, visionary oratory that calls up the originary spirit of scientific research; and it had an impact in all the advanced economies and in the funding of scientific research in our Universities. In our present times, though, does space have anything of the same allure or significance?

The obvious immediate answer is ‘No, not at all.’ That answer has little to do with the facts of lunar or space exploration itself, but it is influenced instead by much more mundane matters. Modern management within the institution of the University prefers to think of space primarily as a commodity; and this particular affliction adversely affects not only the University institutions, of course, but also most corporate and other arenas within the public sphere. Work needs plant, for it needs to be located somewhere; plant costs money; expanding businesses or Universities attract more people, who occupy more plant; people in the workplace therefore cost money, and not just in salary terms but also in terms of the fact that their bodies occupy space. Thus, space and its occupation are no longer matters of visionary import, but rather crude factors in tawdry economy drives, related essentially to the price of property and to the location of University buildings (now treated by the managerialist class in exactly the same way as the plant of corporate business). The reduction of space – an intrinsic and even endemic demand for ongoing reduction that is seen axiomatically to be consistent with matters of efficiency – leads, in much of what passes for good modern management, to cultural norms that highlight the ‘advantages’ of hot-desking or home-working, which are polite ways of telling staff that they are, quite literally, a waste of space. As in the question of experience in my previous chapter, the physical body becomes an obstruction for efficiency-drives to overcome.

Considered in this way, space becomes a concept that drives any institution towards pusillanimous parochialism, sometimes referred to as ‘modernization’ and ‘increased efficiency drives’. In the jargon,

‘VfM’ or ‘value for money’, the ‘three Es’ become the motivating force here through which, supposedly, by starving an institution of resource (‘economizing’) – including, centrally here, space – that institution somehow magically works more cheaply (‘efficiency’) and thus gets better results (‘effectiveness’) than was the case heretofore. More pointedly here, in having thereby to justify the use of space, we effectively are asked not just to do our work or carry out our occupational duties, but also to justify our *occupation* in – *and of* – a place of work (which is what underpins the modern audit culture that stifles invention and discovery). Our occupation of this instrumentalized and shrinking foreclosed space is to be justified in terms of the economic profit that can be securely predicted to flow from the research – itself to be managed equally in terms of certain ‘spatial’ analogies and priorities, as we will see in what follows below – that is to be carried out within that shrunk environment. Thus, ‘managed space’ now keeps us firmly within the bounds of the earth and of the already known. It is anathema to research as such.

When the United States began to realize Kennedy’s imaginative vision, the Apollo astronauts famously provided us with the great ecological icon of our earthly place as a fragile sphere, hanging lyrically blue and uncertain in the midst of a great unknown. The aesthetically arresting image gave us our own place back, but gave it back to us as a place changed forever; and our identity changed with it. Yet effecting change such as this is, in many ways, the very point of the University. It is what was going on in Kennedy’s professorial lecture in Rice, as he gave his audience a new imagined identity, through a visionary concept of space as the organizing and central principle of expansive research.

All University education brings about a form of deracination such as that felt by the astronaut staring back at ‘home’ on earth. The point – the project – is to change how we inhabit the planet or home in every sense. The sense may be scientific, sociological or cultural: that is, the sense can be determined and described in terms of the true, the good or the beautiful. It most certainly is not the case that we should be simply finding more cost-efficient ways of *exploiting* our space, place and identities. Those working-class grammar-school intellectuals of the British mid-twentieth century – the people written about by Richard Hoggart in *The Uses of Literacy* – lay this bare: they are individuals who are firmly identified with their traditional roots, yet no longer easily able to remain at home in that space. The tension that this situation produces is what we call research, in fact, and it gives us new ways of living, of expanding the spirit or imagination, of changing not just our personal space but also the space where we all live as communities, cities, nations, civilizations.

However, the wayward drive towards the cost-efficient exploitation of space offers, in many ways, a perfect description of the misdirected pressure that governments in the advanced economies have placed upon University research in the decades following the heady moments of hope and expansiveness of spirit that we saw in those grand rhetorical and political gestures of the 1960s. Space, as a commodity, is itself to be exploited; and its exploitation will lead to further manipulations of space that will encourage further exploitation of the resources of the planet we call home. Behind this is an ideological drive in which citizens will start to 'know their proper place', as it were; and, in this, I mean to hint that there is a tacit political and ideological drive here, and one that is meant to 'contain' (if I can pursue the spatial metaphor) the potential or latent demands of the human subject and spirit for edification and expansion of consciousness into unforeseen modes of thought.

For Kennedy and Wilson, science *was* government policy; in our more parochial and miserly time, instead, science in the advanced economies is being forced to act merely *in the service of* government. There is a world of difference. We might now reaffirm, against this prevailing ideology, that space is more than money: it is possibility, imagination, opportunity. Research, in fact, is and should fundamentally be about a certain spatial expansion or expansiveness: generosity is the moral term that we would use to describe this, the generosity that is marked by a hospitality towards the new, towards the foreign and the strange unknown.

1

Kennedy came to power in the elections of November 1960 and took office in January 1961. The president he replaced was Eisenhower who, in his own farewell address on leaving office, gave an equally important speech. As with Kennedy, Eisenhower was profoundly aware of – even shaped by – Cold War ideology. In the speech, he pointed out that the United States now had, for the first time, not only 'an immense military establishment', but also 'a large arms industry'; and he said that the combination of these was a new phenomenon in what he called 'the American experience'. He stated its supreme importance, arguing that it affected the 'very structure of our society'.

He then uttered the phrase for which the speech is now best known, saying that we need to be watchful of the resulting 'military industrial complex', for 'the potential for the disastrous rise of misplaced power

exists and will persist'. This is important for present purposes because Eisenhower directly relates this complex to the research that goes on in the University, and with it he raises a question about the function of the University's research within the contemporary public sphere. His concern was that governments might deploy the 'military industrial complex' for direct violent ends and purposes – purposes that, in his view, threatened the United States. What he had not foreseen was that governments might be much more subtle and indirect than this: the ostensibly bland issue of space-management might be able to do the needful instead, reducing human possibilities while maximizing governmental control of our public spheres.

Eisenhower points out that, with the potential rise of the military-industrial complex (and, in early drafts of the speech, the word 'academic' had also been inserted as part of the complex), the very liberties and democratic processes that constitute the identity of America are at risk; and the citizenry needs to be made aware of the risks, alert to the dangers, through increased knowledge. He then links the development of the military-industrial complex to the technological revolution, which, he claims, had been 'largely responsible for the sweeping changes in our industrial-military posture' in the preceding decades.

'In this revolution,' he goes on, 'research has become central; it also becomes more formalized, complex, and costly.' Then, in what is the most telling passage of the speech for our present purposes, he says:

Today, the solitary inventor, tinkering in his shop, has been overshadowed by task forces of scientists in laboratories and testing fields. In the same fashion, the free university, historically the fountainhead of free ideas and scientific discovery, has experienced a revolution in the conduct of research. Partly because of the huge costs involved, a government contract becomes virtually a substitute for intellectual curiosity. For every old blackboard there are now hundreds of new electronic computers.¹

Above all, his concern was to get what he saw as the right balance between, on the one hand, an overweening State that would attempt to control research; and, on the other, a scientific-military elite that would try to wrest control of what had been a democratic constitution. Public policy should not be driven by a research elite; but, equally importantly, research should not be driven solely or even primarily by the demands – financial or ideological – of the State.

That is to say: each should have its own designated space, in the interests of maintaining freedom. In the days of Eisenhower and Kennedy, that freedom was dominated and shaped by the fact that their nation was on a quasi-permanent war-footing. These were Cold War

days, after all. The question that arises now is whether, in recent times, when politics are dominated by questions of security and terror, we have ever managed to escape such a war mentality. Further, when the potential enemy with whom we are at war is a vaguely defined 'terror' that threatens an equally unclear 'security', it becomes difficult to identify that enemy as something external to the State: the danger is that terror – and the terrorist – has become the enemy within, the new version of reds under the bed; and, further, the question is whether any citizen might somehow, in the dark space of their own interiority, be harbouring such terrorist ideas themselves.

We are in a new era of suspicion, and one where surveillance of spaces becomes thought of as a fundamental condition of survival; and, in almost religious terms, the very inner spaces of our own consciousness or even unconscious become fundamentally suspect. Now, then, the fundamental question for us in this chapter becomes whether the pursuit of research in the University has managed to realign itself with our priorities of justice and freedom, a justice and freedom based in the generosity that should shape the true, the good and the beautiful, and not in the demands for technological supremacy over an implied enemy. If, by contrast, our research is still dominated by the demands of an economy on a war-footing, where might we hear any voices being raised to warn us of the dangers? Instead, we might, like Pascal, start to hear an 'eternal silence', the 'eternal silence of these infinite spaces' that he found so poignantly frightening in his prescient *Pensées* in the late seventeenth century.

The military-industrial-academic complex described by Eisenhower yields a model of research concerned with and even driven by the demands of imperial power in a potential conflict situation. Such power is essentially a way of controlling and appropriating space, bringing space under control, bringing foreign space into domestic law and governance. This is entirely different from a state of affairs that welcomes the foreign or the strange in the mode of hospitality: rather, it is precisely a way of refusing that generosity, driven instead by misery or the avaricious meanness of pure fiscal or arithmetic measure. Crucially, it is important to note that, effectively silently, the academy is brought in this to a state of affairs in which it serves the politics of the State. Its research is funded by the State, but not so as to enable the search for the true or the good: rather, what is at issue is the establishment of political ends, ideological ends. Tacitly, research is driven increasingly by the ongoing shrinking not just of the public sphere, but also of the private space that we tend to identify with the privacy of our own thought. If funded by government, the argument goes, our research – our advanced thought – becomes

already public; and we lose the private space of reflection – and also, of course, of critique. This is not what is good for the University; and, as Eisenhower could well see on the day he gave his farewell speech, back on 17 January 1961, it was also inimical to the extension of freedom and democracy, elements in what I would call the just.

Returning to Pascal, the kind of tension that was being addressed by Eisenhower finds a much earlier philosophical expression in his *Pensées*. Among the non-classified papers in the Port-Royal edition of the *Pensées*, we find a series of thoughts relating to what Pascal called the difference between two modes of thought. He called these two different ways of thinking the '*esprit de géométrie*' and the '*esprit de finesse*'. The geometrical spirit is concerned with measure and calculation: it aims to *demonstrate* the truth of a proposition by working from abstractions, logical principles and their consequences. The latter spirit – *finesse* would translate not just as 'finesse', but also as something like 'delicacy', 'nicety' or 'shrewd subtlety' – is concerned with *judging* and with judgements made from intuitions that are not themselves necessarily grounded in abstract logic.

This, in some ways, neatly describes the kind of division in terms of attitudes to space that I claim as central to our considerations of research in the modern University. Where research is carried out in the service of government – that is, where it is instrumentalized, measured and quantified for ideological purposes, no matter how positive those purposes may be – then its primary research component and activity are threatened. They are threatened because the research is done in a measured or audited way – governed, that is, by the *esprit de géométrie* – and the point is, at least partly if not wholly, to conform to and to serve pre-existing principles and abstract ideological themes. In the extreme case, the expectation will be that research evidence is to be produced by researchers in ways that are fully in conformity with predetermined government policy. The result of this is a research wherein space has to be managed, measured, accounted and paid for (as if one could ever actually 'buy' space). When research is genuine blue-skies, then the *esprit de finesse* is prioritized; and, in this, we have the possibility of scientists and researchers expanding space, exploring and pushing boundaries, even following intuitions or hunches in an experimental fashion (that is, *inhabiting* space, posing questions about *place*, which is much more rational than the idea of purchasing it). This latter is research that is consistent with the first principles of the University that I set out above.

Kennedy's speech, while being rhetorically extremely edifying, lapses into precisely the kind of thinking that also shaped that of Eisenhower. In both cases, there are essentially two divergent attitudes to research at

work; and the tension between them is palpable. That tension persists to our present times; and it may even be said that that Cold War ideology – probably carried through into questions of terror and security – is still one of the major determinants of how we conduct research in the University. However, the more fundamental question is: can there be a mode of research that is *not* governed by the question of space and its control? An attitude to space might seem to offer only a rather tangential way of approaching the question of research in the University; but, in what follows now, I will show that it is fundamental to our concerns.

2

In some ways, I am tempted to point out that the poets, philosophers such as Pascal and literary critics got there before Eisenhower and Kennedy. Specifically, in 1957, William Empson published an article in the *Kenyon Review* about the seventeenth-century poet, John Donne. It was called ‘Donne the Space-Man’. Counter-intuitively, he was applying the terminology appropriate to the most recent and advanced scientific research in his own day to this early modern poet and Dean of St Paul’s Cathedral in London. The point of the article was that Donne’s interest in space and in the universe, especially in his newly emergent post-Copernican world of the early seventeenth century, offered us a new way of thinking about ourselves and about our own location in place and time. Specifically, Empson’s Donne brings about the era of a certain relativism. The tenor of the article, broadly, is that if it is possible – following the Copernican decentring of the earth – that there are many universes, or at least many worlds, then it is also likely that there is no single overarching guarantor of a single and univocal truth: no God, so to speak.

This, genuinely, is the opening of a new age of modern humanist study and thus also of a mode of scientific research that was to be empirical, evidence-based, and potentially merely relativistic and provisional – but yet dominated by the demand, all the more urgently now, for truth. If truth is now elusive, and thereby no longer so easily assured or guaranteed thanks to our understanding of space and of our perhaps less than significant place in the universe, then it becomes all the more necessary that we research, in more fundamentally imaginative ‘blue-skies’ ways, to try to find it; or, at least, to find ways of imagining – even building – a world in which we can live with the resulting uncertainties.

Donne’s poetry is indeed obsessed by space and by its manipulations. He writes not long after the first telescopes have come into reliable use in

Europe; and he starts to see the world as a space that can be manipulated by toying with perspective and the resulting play of space or of point of view. The telescope was regarded, in its early days, not just as advanced technology but also as a kind of expensive toy: and playing with it became central to discovery. The technology of the telescope lens allows the viewer to control space (or at least its perception) and to change perspective, making that which was small into something big, and vice versa. Thus, in his poetry, fleas can contain entire worlds; the universe can be collapsed into the eye or face of a lover; the world of east and west can be united in the space between the reflecting gaze of two lovers, and so on.

In this, Donne is bringing the realm of play – so central to experience – into a direct relation with space and with research into truth. His effort to reconcile technological savvy with intuition results in a new language, specifically and above all a language of love. For Donne, as a poet, the truth that is now always in question is also often related to love, and he will frequently play with space and with exploration metaphors in order to suggest that the truth of the world lies in the goodness of an aesthetic relation based upon lovers reflecting each other:

Let sea-discoverers to new worlds have gone,
 Let Maps to other, worlds on worlds have shown,
 Let us possess one world, each hath one, and is one.
 My face in thine eye, thine in mine appears ...
 Where can we find two better hemispheres,
 Without sharp north, without declining west ...
                                 John Donne, 'The Good Morrow'

We are not yet here in the Keatsian world where truth is beauty; but we are certainly in the world where truth and beauty become aspects of space and of the play of perspective. Indeed, when Donne was writing, many other thinkers are also exercised by the play of space. It becomes central to the constitution of knowledge; and it thus becomes central to the pursuit of the true, to our disciplines of the hard sciences.

There is a set of historical determinants here that also need to be fed into our consideration of the founding conditions of modern research in the University and for the importance of space to that foundation. In the world of the medieval University, the question of space was, at least ostensibly, very different from these present thoughts, and also different from the perspectival play of Donne's early modern world. The University of the middle ages was then really composed not of formalized and managed space at all; rather, the University comprised groups of

peregrine scholars who were able to move around to teach, for they were not tied to specific buildings, plant or locations.

As I indicated in my opening chapter on first principles, such an arrangement might very readily map on to the idea that the University is better thought of not as something that exists as a material set of buildings in a particular place, but rather – and more fundamentally – as an *event*. The University is something that ‘happens’ or, in terms appropriate to this chapter, it can be thought of as something that ‘takes place’; and it does this only episodically. When the episodes are repeated in the same geopolitical space, then they become identified with a location; and we thus get the development of federated places, like colleges in Oxford, Paris, Bologna, Salerno, Glasgow and elsewhere. The settlement of the wandering scholars begins. Historically, the location in space becomes something that grows into larger federations; and eventually this is writ large into something like the coherent national systems that have grown up worldwide over the last two centuries.

As it evolves in this way, however, the University as institution makes itself concrete, and it does this in ways that make the domination of place more important than the historical activities constitutive of the University-as-event that go on episodically. Indeed, as we have already seen, the University becomes, in some basic ways, tied to the formulation of a national identity and national character. Something similar then also happens at the micro-level of its conception of space itself. The management and occupation of space supplants the idea of expansion of space as a condition of research: geometry starts to triumph over finesse, as it were. As I hinted already (and I shall say more on this below), we bear witness here to the triumph of the ‘module’, with its building-brick geometry, over the more organically living and evolving consciousness, and over that very experience that we call human development or just ‘thinking’.

I should, of course, make it clear that, in this present chapter, I am not advocating a return to the medieval condition of the University. There are, as we know, too many politicians – and maybe even vice-chancellors or University presidents – who would be keen to see this as a neat way of saving money, by selling plant off and asking us all to work from home, and thus at our own expense. It is important to note that the peregrine scholar was part of what was essentially a privatized institution, in which individuals would pay for what was essentially an atomized set of learning exercises. Such atomization is paralleled by an atomized condition in society: dog eats dog. Some politicians, primarily those of the political right-wing, do in fact see this dog-eat-dog, every-man-for-himself and excessively individualized attitude as a norm; and

they will foist it upon the University by arguing that the institution exists for private gain, that one ‘invests’ in an education for the purposes of benefiting as an individual economically later (for more on this, see chapter 6 below). My concern in this book, however, leads me to address the University as something that is of central interest to the State, because it is of central importance, as one of our instruments of civilized freedom and democracy, to the idea of a community of interlocking and negotiated interests.

In exploring this, Pascal does indeed offer us a useful starting position. Famously, one of Pascal’s most poignant *pensées* – and one that I have cited already above – is in the group that he entitled ‘Transition’ or ‘Change’. There, he wrote, in a rather isolated phrase or fragment, that ‘the eternal silence of these spaces terrifies me’. The spaces in question are those of the universe; and Pascal is, in this ‘Transition’ section, considering at length what he calls the ‘disproportion de l’homme’, the question of the human’s relation to the environment considered in terms of our occupation of place and time and our own tendency to self-aggrandizement. Pascal is amazed by the happenstance that places him in this space, ‘here’, rather than elsewhere in space, and at this moment, ‘now’, rather than in any other time; and, above all, he is amazed that, given his insignificance in the face of the immensity of an infinite universe, he seems capable nonetheless of thinking of that immensity, of ‘containing’ it in his own thought or in the interiority of his consciousness. The terror in question arises from the fact that this universe, in its immensity, effectively has no need for Pascal, no need to address him; yet, despite that obvious insignificance, Pascal knows that, in some ways, he actually *contains* that immensity, for he is able to think and to imagine it.

I suggest that this restless and potentially terrifying condition is one that describes what research is about, in fact. Part of the task of research is to make the world answer to the possibilities of human imagining; part of the point is to make the world respond and to talk back – to break that silence so frightening to Pascal – to reply to the call of the human imagination. It is also, of course, vital that the human imagination has the subtle shrewdness – the *finesse* – to be able to respond to a mysterious silence, to respond to the fact that we may be insignificant and to find ways of imagining, in the face of the world’s indifference, what a viable future might be. For Pascal, the search was for the fundamental good, which he called God; for the humanist, it is the search for the true, but it is carried on under the same aegis as the work and thought of Pascal. What is at stake is an extension of the self beyond the self, beyond the boundary as it were.

In some ways, we might then think of research as being related to *desire*. By definition, desire is something restless, something that does not know quite *what* it wants; but it does certainly and definitively know *that* it wants. Desire is that momentum that makes the self seek alterity, makes the subject of an activity reach out to whatever it may be that is beyond it. The 'beyond' in question here might be thought of as the transcendental; but, in fact, and in secular terms, it is precisely what is meant by the true, the good and the beautiful in that constellation of technological progress that we call modernity, that culture typified by the restlessness of Donne or of Pascal.

Desire, too, is a question of space. Roland Barthes knew this when he wrote a small but extremely important book (*Sur Racine*), in 1960, researching the seventeenth-century French playwright Racine. In Racine, Barthes found many elements of the kind of bodily play that we have already foregrounded in earlier chapters; but, importantly, he founded his book – a revolutionary book in literary research, opening the entire field of poststructuralist work – on an examination of space in Racine's plays. He begins his study by noting that, in Racine, there are three Mediterraneans: classical ancient, Jewish, byzantine; and he rapidly sees that these three spaces form one complete complex, uniting the forces of fire, earth and water. However, those elements, which will become constitutive of desire in the plays, realize themselves in particular scenes or located spaces. Barthes begins from the bedroom or chamber; and, from this, he notes that there is in the complexity of the Racinian stage, a fundamental conflict of *inside* and *outside*. Inside represents a kind of spatial terrain; but outside is marked by temporalities that allow for death, for flight and for the 'event'; and the event, especially the event of the world outside, is never finished. It is an invitation to further play, to continue the play beyond and outside the scene of the theatre; and this, in fact, is both the nature of desire and of research.

This attitude is not a million miles away from the pragmatism advocated by a more recent philosopher and critic such as Richard Rorty. He was always at pains to stress that the point of philosophy – indeed of all research that involves thinking, that involves an unpredictable event – is not to find answers, but rather to 'keep the conversation going' or to keep us discussing things in such a way as to generate further questions and to bring more voices into the discussion. Any answer that we may find, we know, is provisional: the history of research in any discipline indicates that fact. The construction of this proper kind of research – the research that will take us out of the bedroom or study, out of the library or laboratory, and into the blue skies above the Mediterranean, as it were – is one that opens us to time and to the event.

Behind this is a philosophy of desire as constituted by the exploration of space, the transgression of boundaries – and, above all, the transgression of the boundary of the self and of the conversational language in which we articulate that self. The point, always, is transformation – of space or environment, of the self, and of the self's constitutive language.

Barthes quite possibly gleaned a lot of his thinking from the work of Gaston Bachelard, who wrote eloquently in 1958 of the *Poetics of Space*, as he called it. In that book, he pointed out that 'inside and outside form a dialectic of division', a dialectic that has all the force of the strictly demarcated opposition of Yes and No. Bachelard argues that if we consider space in this way, however, we end up with a pure geometry that has to exclude the facts of our historical being in the pursuit of certainty.

Bachelard thus prefers to think of the human subject as taking neither the inside nor the outside, nor even the opposition between them, as fundamental; and, in avoiding that kind of opposition, that spatial structuring, he proposes a situation in which research is absolutely necessary because the door that separates inside and outside is always 'half-open'. That is, uncertainty – and the desire for resolution, but a desire that can never be satisfied – is the stimulus for research. Research is not an activity that allows us to 'gain access' to a hidden truth; rather, it is an event-oriented activity, not pre-programmed, with no already existing but tacit or occluded solutions. The dialectic of inside and outside – with all its attendant ideologies of 'widening access' and the like – is but an aspect of managed space. It is not about the release of imagination into freedom that is constitutive of proper and genuine research; but, on the contrary, it is simply a way of restricting freedoms while merely *pretending* to enjoy them and to widen them.

In political terms, the question of a democratic education – which would begin to satisfy the criterion for the University as the pursuing of justice – is much more fundamental than could be determined by answers to the problem of who has 'access', important though that might be. It is really a question of the emancipation of the imagination, of the freedom from restricted and managed space that so dominates our contemporary predicaments.

3

I have stressed the importance of the body and of experience in the teaching and learning situation; and now I need to turn to the importance of the body and bodily space for the organization of research. We

can look at one of the UK Research Councils, the Biotechnology and Biological Sciences Research Council (BBSRC), as an example here. It provides a clear guide to the organization of its research funding on its website. There are four key committees for this council, one of the largest in the UK; and the research that it funds is spread across four broadly overlapping areas. The diagrammatic representation of the relations between various research activities and the separate committees looks rather like a Venn diagram, though it is an open-ended one, with lots of permeability rather than just intersections. It is clear in directing prospective researchers to specific bodies for research funding; and much of it looks non-controversial. For typical and clear examples, work on agricultural systems goes to a different committee from work on food science; or neuroscience is funded separately from mathematically oriented biological research and so on. Right at the centre of the diagram, and seemingly at the core of the entire activity, is genetics.

This is interesting: the spatial diagram, in placing biogenetics at the centre of its overlapping fields, is drawing attention to a certain contemporary phenomenon. It is not the fact that this is all organized in a spatial diagram that is important here (indeed, it would be difficult in the visual plane to present it otherwise); rather, what is important is that, at the centre of bioscience funding, we find the body. More importantly still, we find a deep interiority of the body, a kind of substratum – the genetics – that shape the very possibilities of any body in the organic domain.

This is interesting because of the contrast with the age of Kennedy. Then, in the 1960s, a Cold War ideology has Kennedy looking at the expansiveness of space, well beyond the confines of the human body. The V2 rocket becomes a massive prosthetic weapon allowing the human body to escape the very bounds of the earth itself. Now, though, in the contemporary times, we are looking deep within in a moment of profoundly introspective research. In what has become the conventional parlance, we are looking at the ‘building blocks’ of life itself.

That conventional metaphor, of the ‘building blocks’ of life, is telling and is indeed far from innocent. It reveals a mode of thought that helps prove the argument that I am making in these pages. In what follows, remember that the great scientific advance promised by the telescope coexisted with the use of that technology for *play*: many considered it a plaything, a toy. In the late 1940s and early 1950s, another new kind of toy was developed in Denmark. It consisted of small building bricks that could interlock with each other to make a potentially huge number of different constructions. It was called ‘Lego’, from the Danish words *leg godt*, meaning ‘play well’. Importantly, for present purposes, these blocks operated as small ‘modular’ units of carefully regulated

sizes. However, although the toy allows for a huge number of different constructions, it cannot possibly allow for an infinite variety. It cannot do this precisely because the modularized brick units, though perhaps themselves differing in size or coming in precisely measured units, operate as a mode of regulated and measured space. 'Playing well', according to this, means limiting the possibilities of one's play: there are, it turns out, only a relatively *small* number of permutations that are possible, and those permutations are *determined* not by the 'content' of the module-bricks, but by their spatial and modular form. It is this predetermination of possible outcomes that we now call 'regulation'; and, as in Lego, our regulations have become determined by an attitude to space, and one that *limits* our potential.

Lego gives us our 'building blocks' research mentality in how we describe even something as organic as genetic codes. In terms of space and its relation to a war mentality, it is as if the war is now with ourselves: a war with our own destinies or 'internal' programming – or, in the more sinister fashion at which I hinted above, a war with our own inner evil or incipient 'terror', a terror that might reach to include simple critique or critical private thinking. We need to crack the codes, decipher the future possibilities that are hidden within those codes; and that way, our bodies will stop being sites of terror and become the domain of our security. Above all, though, research is now conditioned by a 'looking within ourselves', and a looking within that aims to find our modular and coded roots. 'Roots', however, is the wrong word, for that is too organic; rather, we are looking for our Lego.

This looking within, of course, follows a period when scientific research has concerned itself with the *reduction* of space. First, the miniaturization of transistors allowed for various technical developments to be put into widespread use; and, following that, nanotechnology has led us to that state of affairs in which we now have much more computing power in the most basic mobile phone than *Apollo XI* had when it landed on the moon.

This shift to an introspective research is not specific simply to the biosciences, however: indeed, it affects virtually all of our research practices. In nearly all of the councils of the UK, and for research funding more widely across the developed economies, there are priorities for *methodological* research: that is to say, for work that will reveal new ways of doing research by looking at the structural foundations – those building blocks – of our different disciplines. In the Engineering and Physical Sciences Research Council (EPSRC), we find a heavy stress on materials, especially at the atomic scale. The Economics and Social Research Council (ESRC) prioritizes behavioural studies and

well-being. Even the Natural Environment Research Council (NERC), while obviously taking a global view of matters such as global warming, nonetheless turns inwards to address matters of technological progress as a key to world sustainability.

In all of this, we see a kind of shrinking of space. This is not of itself either a good or a bad thing, of course; but it does require further consideration. What we will find is not just that there is a shrinking of space, but an evacuation of space as well. We call it ‘modularization’, and we have applied it to research every bit as much as to undergraduate work.

4

There are two other occasions on which Pascal addressed space. In the unclassified papers of the *Pensées*, in fragment 407, we find him meditating on the distance between himself and God, between himself and happiness. The Stoics say that we should look within ourselves to find peace, he writes, while others say we need to divert ourselves through the attractions of the external world. Neither is true, he claims; and asserts that our happiness lies in God who is *both* within and without the self. Finding this ‘proper’ attitude to space, and to our relations with the possibilities of transcendent knowledge (for Pascal here, God), is axiomatic to our happiness. Again, the search for the true here is being construed as a spatially grounded inquiry.

More telling is fragment 68, among the classified papers in the section that he titled ‘Misère’. There, he is concerned with questions pertaining to justice and tyranny; and he again records his fear in the face of immensity. More poignantly still, he acknowledges his relativism. What fills him with dread is pure contingency, the question of why he is ‘here’ rather than elsewhere, why he has been allotted this ‘little space of time’, as he puts it, instead of living at any other moment. In this formulation, Pascal blends together the questions of time and space; and time, we will see, is also important. In my previous chapters, I have indicated that the production and extension of time is important for teaching and learning; and here, it is equally important for research.

At a basic level, though, the question that Pascal asks is the axiomatic and fundamental research question for all University disciplines, for it asks the question, ‘Why are we here?’ More importantly, the inflection of the question prioritizes space: ‘Why am I *here*?’ This gives a historical particularity and a material experience to the research drive. It is

fundamentally *not* concerned with the abstractions of geometry; rather, it is concerned with *justice*, with what I will do here, now, by way of my research, in the face of potential tyranny.

I have pointed out that Kennedy and Eisenhower are shaped by Cold War ideology; and I have indicated the ways in which this might trouble any idea of 'pure' or disinterested research. However, what I now need to stress is that all research, properly understood (that is, research governed by the criterion of the desiring of truth, goodness, beauty), is also political – but in the sense that it should always be by definition first and foremost primarily a 'blue-skies-searching' for the just and for freedom. However, this is not the way in which research is usually driven or carried out in the modern institution. The University in our time is afraid of space, afraid of the imagination that drives research; and, as a consequence, research has to be regulated, managed and controlled. It is also afraid of time, of the time that can bring change in the future; and this also leads to a tacit demand for control. This is a *covert* and unacknowledged politicization of research, even of allegedly disinterested research. It is not simply that we have tended to prioritize so-called 'applied' research; it is rather that the research has forgotten its primary aims of searching imaginatively for justice and for democratic freedom.

One primary tool for the resulting constraints upon research is 'space-management'. This management of space relates not just to the costing of square metres; it extends more fully to the attempt, by governments, to determine *where* research will take place. Especially in recent times, when governments in the advanced economies have been reluctant to fund research from public funds, there has been an effort – and in the UK a very determined effort – to limit the places where research will happen. That was one of the key purposes of the Research Assessment Exercises (initially called Research *Selectivity* Exercises) that were in place from the early 1980s: the idea was that, by competitive assessment of research, government would be legitimized in its attempt to fund only a few institutions where 'excellent' research was happening already. In slightly more subtle fashion, there have also been attempts to 'concentrate' research in so-called niche fields, thereby reducing the scope and ambit of research activity. In yet more subtle moves, the idea of 'competition' is being occasionally forgotten, to be replaced by a rehabilitated 'cooperation', in an effort to persuade researchers themselves to 'concentrate' their research activity together. In all cases, the reduction of scope, the reduction of space, is key.

This is not to say that research – good research, consistent with the fundamental principles of the University – does not happen: on the

contrary. However, it happens despite the managements of space and of time that otherwise hamper it.

5

One way of explaining this is to consider, quite literally, the ‘place’ of the University in contemporary thinking. We tend to think of it sometimes, in literally ‘utopian’ fashion, as an institution that is international, deracinated, fundamentally not tied to any specific geographical location. That is, of course, an idealized view. In practical terms, our thinking is driven by completely opposite demands, which we say are the demands of ‘practicality’. Accordingly, we are asked to consider individual Universities as ‘regional’ institutions, for example. These are supposed to enhance the economy of specific parts of a nation or country, and they are to do this by attracting and stimulating the business-drivers of an economy to a specific place.

Just as we have seen teaching broken up and organized into ‘modules’ that can be rearranged and combined to produce a whole, so the ‘national’ system is now to be made up of these building-bricks that dot the country. As with modules, diversity is the alleged commanding order of things with this. However, what we have here is an extremely constrained and regulated ‘diversity’, a diversity that cannot bear fundamental difference or change, Pascalian *transition*, in which people may start to change their places rather than simply to ‘know their place’ and rest easy within it. The institutions are very definitely not to be parallel to each other: they will have their separate and diverse ‘missions’; and that supposed multiplicity of mission, it is alleged, gives the student something called ‘choice’, which we too often accept as our poor substitute for what should be a more fundamental freedom.

It is time to explore the culture of the module as part of the compartmentalization of research into managed and restricted space, and as a consequent restriction of human possibility. Modularity and regionalization, in fact, are of a piece and go together; and, in what follows here, we will see that the more or less explicit management of space that is central to both of these inhibits the fundamental aims of research.

At one level, and from a specific and easily identifiable ideological point of view, the modularization of University degree programmes makes perfect sense and has certain obvious benefits. From the point of

view of both teacher and student, there is a high degree of organization: the otherwise immense world of knowledge in specific fields can be broken down into manageable units. Very importantly for present purposes, the teacher can supposedly align their teaching more firmly with their research, for the modules that they choose to design and teach are governed primarily by those intellectual interests, and not by any allegedly intrinsic demands of an overarching or transcendent programme. In any case, the programme as a whole is too big to allow any one individual to have an overview; and the breakdown into modules reflects, and morally respects, the individual intellectual freedoms of each participant.

That freedom is respected for the student as well, in this view of things. The student can see a kind of ‘map’ of the whole of the field of study, but is enabled to negotiate their own chosen ‘pathway’ or ‘progression route’ through and across the field. The student is now rather like the peregrine scholar of the medieval world. The claim is that the student now has a number of advantages. In the first place, they have an essential freedom, enacted in and through the *choice* of specific high-quality-because-research-led modules to take. The choice in question, and the resulting configuration of the degree, gives them the chance to express their specific identity, different from those around them, with learning ‘tailored’ to measure, as opposed to being like a potentially ill-fitting ‘off-the-peg one-size-fits-all’ suit. In this, what is now released and celebrated, it is claimed, is the individuality of the student. In passing along the way, something also happens to the student: they become a ‘customer’ or a consumer, making their own ‘journey’.

It may seem perverse to attack this as being actually precisely the opposite of what is empirically the case, but that is what I intend here to argue. First, the module is an exact illustration of the triumph of the *esprit de géométrie*, entirely unregulated or unmodified by any *finesse*. The programme as a whole, and any sense of an intrinsic logic of its wholeness, no longer exists; and in its place, we have fragments of a whole that are assembled in idiosyncratic ways. This, say the advocates of spatial regulation and of the module as our basic organization principle for pedagogy, is precisely the point: the idiosyncrasy here is valuable for two main reasons: a) it is impossible to attain a knowledge of the whole, as the field of each discipline is now so massive; and b) idiosyncrasy is precisely what should be glorified, as an indication of our non-coerced individuality.

I adverted above to the invention of Lego, the toy with interlocking building blocks, as a kind of parallel here. It is indeed the case that Lego – and modularization – ostensibly allows for a huge number

of possible different permutations of a programme or built system. However, is it not peculiar that modules can all be measured as comparable in size, or at least computable as multiples of each other? How is it the case that 'Deconstruction' can be 'the same' in functional terms as 'Aspects of Modern Literature, Painting, Music', say? How might these 'equal' a half of 'Renaissance Sculpture in Italy' or 'Computational Mathematics II'? As a teacher, if not as a student, one knows empirically that there is a radical shoe-horning effect here, as modules are wrestled into the 'proper' shape in such a way as to make them all comparable or, more importantly, *exchangeable*. No matter how long it might take, in intellectual and academic terms, for one to engage in a course of study of deconstruction, in administrative terms it *must* take precisely the prescribed computable number of hours, series of classroom sessions, essays with their prescribed and matched word-limits, and so on. If the module unit is X, everything must be X or a multiple thereof: there can be no irregular-shaped bricks. The module determines the learning, and not vice versa.

Let us note something important in passing. Even the more modern developments of Lego have realized this and the basic brick-structure is long abandoned for a more varied kind of modelling; but this will never be able to reach the kind of organic shape that is fundamental to and constitutive of learning, or of research. In short, our University models in which research and teaching are caught up in managed space – the regulated module – are, quite simply, out-of-date: they have failed to adapt to the requirements of our contemporary predicaments and needs for more organic research, learning and teaching.

The module is, as it were, the *currency* of a degree; and, measured like currency, it allows for all sorts of mercantile exchange. We usually call this the module's CAT value (the acronym expands as Credit Accumulation and Transfer). As with money, the key thing is that the tokens for exchange – CATs – have no actual material content: they allow for a transaction to take place, certainly; but they do not in themselves act as *transformative* in the ways that I have described in earlier pages. The transactions that take place are always between already settled entities: there can simply be *no research whatsoever* in this structural organization, where research and thought are shoe-horned into units of exchange. The 'research-led module' is, at some fundamental level, an oxymoron with regard to its establishment of relations between research and learning.

Further, such a modular organization does indeed allow, in principle, for multiply divergent end results: some may build a house that is all red, others a one-storey house. The possibilities are seemingly endless – but

only seemingly so, since the shape of the foundational units – the limited and prescribed shape of the modules – predetermines and circumscribes what is possible. Moreover, what do these possibilities amount to? In fact, the end result is always a house, but one with minor modifications only. The end result, then, is but the signing of a name, the construction of an identity ('my' house differs from 'yours' because my door is green and yours is blue); and the difficulty – as in Lego – would be in building something that was both entirely individual while also having legitimacy. That is to say: only certain 'buildings' can be recognized as buildings; and only some of them will have legitimacy or will actually 'stand up'. It is the same with the alleged freedom of the module: the spatial organization is designed to *produce conformity* to what we can now call 'official' identities.

We might illustrate this most readily through research and teaching in humanities subjects. We have long ago given up on the idea, in an English Literature degree for instance, of what used to be called 'comprehensive coverage' of a broad canon of agreed core literary works (an extension of what is often called the 'great books' programmes in many US liberal arts programmes). Rightly, many indicated that the agreed 'canon' was essentially rather restricted, eliminating a number of groups of people from literary and cultural history. There were not many works by women; not many by people of ethnic origins other than the Anglo-Saxon, Anglo-American or Anglo-European; writers who were lesbian or gay were noted, perhaps, as writers, but their sexuality was not of interest; and so on. The breakdown of a belief in a centrally agreed canon, and its replacement with a more diverse curriculum, is indeed welcome and very important.

The problem lies in what happens to this in modularization, which proceeds as if we are now 'mapping' a new terrain or drawing out a new series of histories, cultural and literary, in the interests of the edifications of the freedom that I have placed at the core of my University principles. Again, we have a guide in how we might properly think about this. On 9 December 1922, the French philosopher, Alain (the pseudonym of Émile-Auguste Chartier), published one of his many 'propositions on education'. In this small newspaper article, he considers how difficult it is, through education, to advance the possibilities of human change – what I might here call the transformation that is central to any learning and teaching, and certainly fundamental to any research. He asks us to consider the pupil learning the violin, and argues that the adoption of the same method 'is good for everyone' learning the instrument, no matter how different they may be at the start. Some might think that this has the effect of homogenizing them, making them all sound the

same; but Alain argues that it is precisely the adoption of this 'common method' that allows them to express their differences at all. He goes so far as to then make the more generalizing claim – and this is the most telling observation that he makes in virtually all of his writings on this – that 'a common culture makes differences flourish'. Difference, or what we might call the exploration of the human's capacity for imagining herself or himself otherwise, is dependent upon a pre-existing ground of some kind: if we are to differ, we need to 'differ from', so to speak. In fact and by contrast, argues Alain, a condition of *initial* diversification leads only to an eventual homogenization, or a conformity that is essentially limiting with respect to human diversity.

In literary study, the argument might then go that, as a first (and good) step, we abandon the idea of an immobile core canon and replace it with a flexible curriculum, which is to be followed more or less at the choice of an individual student. The result is that the student has a fragmented view of parts of a whole, without any 'finessing' delicacy – that is, no capacity for *judgement*, but only for *measure* or *calculation* – regarding that whole. It is like having Lego bricks without a design or without the idea of a house to be built. Faced with this, as the student moves from one module to another, from one research-idea to another, ranging 'freely' across the field, all that is left in the way of making this cohere at all is, fundamentally, a regular and consistent fundamental *method* of study. It is like making a building in which, systematically, it has been decided that each layer of bricks will be done in alternate colours: one red, one white and so on.

Thus we find the triumph not only of the of the 'Stoical' introspection and reduction of our space that we saw discussed by Pascal, but also the triumph of that 'theoreticism' that reduces all texts, no matter what, to exercises in the identity-formation of the student. In principle, this may be admirable; but, in empirical fact, that identity-formation is not at all free for the kinds of mode of inquiry – the methods – are themselves rather limited: Marxist, feminist, postcolonial and so on. Thus, I as a critic find myself *not* as 'differing' but rather as conforming to predetermined identities: the 'working-class Scottish Marxist', the 'Irish nationalist feminist', the 'bourgeois formalist', for instance. It matters not which one of these one is: they are all commodified versions of the self, each with its own 'market' of books, films, T-shirts, styles, TV shows, 'values'.

Instead of an opened ground in which the student can find an archaeology of the culture that they study, and can find that archaeology as being *to some extent* intrinsically determined by the objects of inquiry, the net result is a conformity to a pre-given 'official' identity. This way, in fact, the module-model leads only to conformity, denying the possibility

of experience and, above all, denying the very principles of research – blue-skies inquiry into the expansiveness of the field – upon which the modular system is allegedly built.

We can write this large now, at the institutional level. Regionalization, in which the University's research is 'applied' to the economic requirements and identity of a specific region, is a form of parochialism that we might now identify either as the triumph of the *esprit de géométrie* or as the improper restraint upon research by an improperly overweening ideological government against which Eisenhower warned us. In either case, research – as blue-skies expansiveness and edification – is endangered.

6

The 'inward turn' of research, that turn away from the frightening expanse of space to the world within at its nano-levels, is also consistent with a further ideological drive towards self-scrutiny. Research, in sum, is shaped by surveillance, and especially by a drive to doubt one's own authority as a researcher. The auditing of space, and also of time, means that a good deal of research energy is spent and wasted in the researcher 'describing' not just what they are doing, but also in predicting what they *will do*, and thus in foretelling a future, describing an outcome and so on.

I leave aside the politics of surveillance for the moment, in order to turn attention more fully to the question of time and the foretelling of the future as a component of research. I indicated above that, when Pascal wondered about his own locatedness, he was also concerned with the issue of time, with his allotment or allocation of *time* on the earth at this specific moment. That temporal dimension has been lost in research; and, if we are to revive a genuine research model that is not constrained by the controlling mechanisms of the space and Lego metaphors, then we will need to find a way of reopening time and temporality, and of bringing a properly historical dimension into our research mentality.

If one can predict the future, then it is not the future. Let us begin from that simple observation. To explain it, consider the example of capitalist exchange. I go into a shop and see a coat that I would like to have. I give the shopkeeper £100; but I do this *if and only if* I am absolutely sure that, in the very near future, the shopkeeper will hand me the coat. In doing this, I bring the moment at which they hand me the coat back into a complete intimacy with the earlier moment at which I hand over the money. In fact, it is *as if* that second moment (the future) has already taken

place (and is thus as fully guaranteed as the past can be or as my present gesture of handing over the money now is). I compress time, in such a way as to make the future (which has not yet happened) really an aspect of the present (as if it is happening right now). Further, the exchange takes place if and only if the coinciding of the two moments is guaranteed. I do not hand over the money in the mere hope that they will give me a coat.²

In this exchange, then, the future is, as it were, guaranteed and controlled. The exchange means that temporal unpredictability is removed, as is any notion of experiment. This is how research is too often regarded: it is seen *as if* it were a mercantile exchange in which, for example, a government gives me a certain sum, but will do so *if and only if* I can guarantee the outcome of my experiments. In recent times, this has been described as ‘impact’; and it is increasingly being used in order to allocate funding for research. Obviously, however, this has to be a fabrication: if I could guarantee the outcome, there would be no experiment taking place at all. Governmentally driven ‘thesis’ would replace research ‘hypothesis’. What is being ‘bought’ here is not research; rather, what is being bought is a decision, or a justification of government ideology or policy. The impact required is not the kind that we saw in 1968, with contemporary Cohn-Bendit confronting government ministers; rather, the impact required is purely financial: will this medical research enable a pharmaceutical company to make money? If so, the success is measured in terms of the difference between the money made and the money invested for the execution of the research; and our term for this is ‘value for money’. It is essentially a channelling of public funding into private company hands, and the misappropriation of University research to that end.

Against this, let us consider research as a genuine opening of time. In this, we would start to see research as being something that looks both backwards into the past and also, crucially, forwards into an uncertain future. To put this most bluntly, research is a matter of generational change: it is, as it were, a debt owed to future generations, but a debt whose capital is given through the researches of the past that allow the present researcher to imagine the world otherwise. It is only in this way that research can take its proper place, as an *event*, in the strict sense that I have been giving that word: the event as that which is un-pre-programmed, as that which cannot be predicted from the state of affairs prior to its taking place. Perhaps, more simply, we can define it as ‘experiment’.

I hand over my £100, but then the question is ‘what happens next?’ Research is there to answer that question, but to do so by looking for the true, the good, the beautiful: that is, research answers the question ‘what comes next’ with an answer that seeks to expand freedom and

justice. It is entirely inappropriate to fund research on the ideological basis of capitalist exchange: that is simply not how research works, and any such funding is bound to narrow and deform its possibilities. Genuine research (and the only surprise here is that one now needs to say these things) entails a state of affairs in which we cannot guarantee the future, but must rather seek to generate it – and to generate it as different from the present. And this, in a brief word, is also the more genuine and proper meaning of ‘applied research’.

I argued earlier that research is about the transcending of the boundaries of the self; but it is now clear that it is also about the transcending of the boundaries of the present. It is about the future generation.

7

It is in this way, in fact, that research and teaching come together. This is close to what Karl Jaspers had in mind when he linked research and teaching in his version of the *Idea of the University*. Jaspers wrote his own manifesto for the University in the days of Weimar; and he was called upon to revise it immediately after the Second World War, when Germany needed to find a new basis for the reconstruction of a nation. This, we should remember, was the nation whose leaders, at one point, had advocated the burning of books. We are never far away from this kind of barbarism, for too many of those who are in power and authority fear the openness that research gives us and its unpredictability; and they fear what may happen if that openness is to be passed on to generations afterwards.

Unlike Cardinal Newman, whose idea of a University in the nineteenth century was one that prioritized teaching, Jaspers argued that teaching and research were interlinked; but research was primary. He saw the University as being the place where we seek truth and, ‘because truth is accessible to systematic search,’ he wrote, ‘research is the foremost concern of the university’. He went on to suggest that this truth is not governed by disciplinary boundaries, but rather is greater than any specific single science or discrete discipline. It involves the whole of the human being, not just her or his intellectual expertise. Thus, this pursuit of researched truth involves ‘the serious commitment of the whole man’. Then, finally, the truth can be transmitted; and this is how he described the activity of teaching. This, then, gives us the model for one of our contemporary myths of ‘excellence’, the claim that quality in teaching is governed – and that it can only be guaranteed – by research.³

All Universities now boast of their ‘research-led teaching’. This, however, is simply an atomization of knowledge and its reduction into modular forms, as I have already shown. Yet there is a further aspect to this that requires exposure. ‘Research-led teaching’ is but another myth. It may be reassuring to those who see the University as primarily to be characterized by its brand of excellence; but, in fact, teaching that is ‘research-led’ is usually poor teaching. Why would one want to teach a first-year undergraduate, for instance, to the limits of one’s own research? It would be a little like trying to teach the basic principles of arithmetic by a thorough exposure to and engagement with the intricacies of multidimensional space and fractal geometries. The undergraduate needs *time* to bring themselves up to a certain kind of speed, time to do the reading and thinking required to be able to cope with the advanced searches that constitute research itself.

The prevailing ideology, however, seems to think of the University as a place where advanced knowledge is ‘held’ in a kind of non-temporal store or spatial repository. The teacher/lecturer is a kind of gatekeeper to this store, while the ‘researcher’ is the one who ‘finds’ the knowledge from somewhere and places it, for safe-keeping and then sale, into the repository. The teacher is then charged with the ‘delivery’ of the knowledge, in its little modularized compartments, to the student, now re-branded as a customer. Needless to say, neither teaching nor research is happening in this ideology. Again, this is not to say that good teaching and good research can’t take place in the University; but it is to say that such good teaching and research as does occur happens *despite* the prevailing myths – such as that, in the present instance, of ‘research-led teaching’ – governing the institution.

Where is that ‘reserve’ on which our ‘research-led learning’ can draw? We all know exactly where it is: it is on the Web. This Web, however, in this ideology, is conceived entirely as a spatial entity: it is seen not really as a ‘web’ at all, but rather as a container of knowledge, a treasure chest that can be plundered at will and without any compunction – or, indeed, ‘payment’. We can plunder at will – most will rightly call this plagiarism or internet piracy – because, even when we take from the treasure trove that is the Web, the material is still there: we don’t remove it. Further, it’s ‘free’ or at least ostensibly freely available at all and any times.

However, it is not, and cannot be, ‘knowledge’ at all. What we find, in this spatialized model, is research commodified as ‘information’. This ‘information’ is ‘transparently’ available; but it is transparent because it has no substance as knowledge or as research. It is only in this mode of thinking that we could ever believe that such research-knowledge can be ‘transferred’. It is not simply a matter now of research-based knowledge

being 'delivered' to students in the classroom; rather, knowledge can be 'transferred' much more widely. The distribution of research, in knowledge-transfer schemes, is what we usually mean when we talk about the benefits of 'applied' research or simply of applying the results of research to real-life situations and practices. Yet, in our prevailing modes of thought, knowledge-transfer is nothing more or less than moving bits of information around: it is like shelf-stacking in a supermarket. Knowledge-transfer is a bit like taking a journey on the Underground or metro system: at various points, you can make a connection; but the specific connections we make are unimportant, for all we are doing is simply moving about in a controlled space. Research, properly understood, would get us out of the controlled space underground for a bit of real exploration of the great city above.

Research-knowledge, by definition, is much more opaque, then, than anything suggested by our prevailing modes of spatialized practices; yet, it is only by our realizing that knowledge will take time to find, and time to move between generations, that we will find anything approaching truth, not to mention goodness or beauty, justice or freedom. For this to take place, however, we need something called leadership; and it is to this that I now turn.