



**National Centre for
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Rewilding the Stems

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*For, in all vital things, men distinguish an Artificial and a Natural; founding on some dim perception or sentiment of the very truth we here insist on: the artificial is the conscious, mechanical; the natural is the unconscious, dynamical*¹

I am sitting in a large, open-sided tent-like structure with several rows of other people, many wearing dark green weather-proof clothes, fit for a mid-September Saturday in Norfolk, with its wide skies, and in the evening a picture-postcard sunset. I am listening to presenters at ‘Gathering’, a nature festival, speaking passionately about land and its ownership and conservation of wildlife, and of the health of soil and of the significance of disorderly hedges.² I hear estate managers, experts in regenerative agriculture, poets who write about bees, policy makers who choose their words carefully, film-makers who advocate the return of banished wolves to rural England, singers who are passionate about wetlands and experts on the flight-paths of curlews and other migratory birds.

The spirit of the day, building on the longer-established ‘Groundswell’ festival in Hertfordshire each June, is one of a collectivist turning away from an enshrining of monoculture, order, enclosure and bounded-ness, as values dominating land management in Britain for centuries, towards a regenerative, restorative approach to nature, soil and landscape.³ A shift towards leaving land fallow for a time, or replenishing it using agro-forestry methods, whilst letting hedgerows and boundary points between cultivated fields grow wilder, is in the (agri)cultural – or perhaps *counter-cultural* -- ascendant.

The cultivation of edges: the meeting points of different systems, such as the interaction of cold and warmer water, as places that maximise biodiversity, is a dominant topic of the day’s conversation. So too is a recuperative reversal that loops what might seem to be past techniques and approaches into the changing context of the present. A constructive approach to finding solutions by adapting human behaviours in favour of long-term effects includes recovery of almost forgotten knowledge, such as how to use the traditional European scythe in long-grassed

¹ Thomas Carlyle, ‘Characteristics’, in *The Edinburgh Review* (Edinburgh, . Vol. LIV. December, 1831); available at: <https://cruel.org/econthought/texts/carlyle/carlchar.html>; [accessed 4.11. 2022].

² See information on Gathering at the Wild Ken Hill website at: <https://wildkenhill.co.uk/gathering/>; https://wildkenhill.co.uk/wp-content/uploads/2022/09/Gathering-Programme_6thSept.pdf; [accessed 4.11.2022].

³ See information on Groundswell, at <https://groundswellag.com>; [accessed 4.11.2022].

meadows. Some speak of opening up to newer inventions, such as automated robotic tractors that can gather data about micronutrients in soil.

A decision at governmental level to offer funding to private land-owners to invest in public goods, such as healthy soil and enhanced biodiversity, is playing a considerable role in galvanising a sense of the need for change. So too is an attendant sense of subliminal crisis pertaining to the basics of food and water, after a summer of unremitting drought that has brought home to many the reality of what at times might seem to be a distanced ‘climate crisis.’ A deepening of relation to place, ground and localness has, meanwhile, also been fostered during recent pandemic lockdowns, as has growing worry among those living close to water about the rising risk of extreme flooding.

On the sea-edged farm where today’s event is taking place, beavers have recently been introduced to do what they do best, i.e. constructing dams to make ponds by weaving tree branches together. The need for humans to construct ‘a new mental architecture’ with ‘new words, a new ordering’ is lucidly articulated by John Howkins, author of *Creative Ecologies* and *The Creative Economy*, who is also in the audience for the day’s event. Mexican poet, Octavio Paz’s comment about the French writer, André Breton, of whom he said that: ‘nature is language and language in turn is a double of nature’ also comes to mind here as I listen to talks by writers and poets harnessing their skill with words in the service of replenishing nature’s capacity for dynamic self-regeneration.⁴

Browsing a book-tent managed by Wildsounds from Salthouse, I get a sense of a restorative design aesthetic present within several current titles, recalling for me the *New Naturalist* series, with its cover wrappers by Clifford and Rosemary Ellis, such as *Life in Lakes & Rivers*, *The Sea Shore*, and *Wildflowers*, published by Collins from 1945 onwards.⁵ Indeed, the Ellis duo, who ran Bath Academy of Art in Corsham in the nineteen sixties, were responsible for inviting Anglo-German poet, typographer and publisher, Hansjörg Mayer, about whom I wrote a book published in 2017, to develop typography and graphic design at Bath Academy in 1966.

In *The Smell of Ink and Soil: the Story of [Edition] Hansjörg Mayer* (2017), I began with his birth into a printing family in Stuttgart in 1943 and ended with reference to

⁴ Octavio Paz, ‘André Breton, or The Search for the Beginning’, trans. Michael Schmidt, *PN Review* 42, Volume 11, Number 4, March-April 1985.

⁵ See the ‘New Naturalists’ website for more information on the books and the contribution by Clifford and Rosemary Ellis: <https://www.newnaturalists.com/clifford-and-rosemary-ellis-iconic-nature-and-travel-designers/>; [accessed 4.11.2022].

his permaculture farm in Andalusia where research into a combination of traditional and innovative methods to add fertility to the Mediterranean soil has been taking place over the past decade.⁶ Mayer was also a leading figure in artists' book publishing and in concrete and visual poetry from the sixties onwards, as I have recently addressed in a doctoral thesis on Mayer, supported by the Department of English, at Birkbeck, University of London.

This took me into a ground unexpected at the outset, where I found myself delving into some of the roots of a now highly contemporary dialogue, significant in particular within Science Technology Engineering & Medicine [STEM] subject areas, relating to a growing dominant discourse in artificial intelligence, machine language and machine vision. In so doing, my writing has significantly engaged with the ideas of Noam Chomsky, a foundational figure in the mid-fifties in cognitive science, who remains highly active in present debates around the direction of machine languages.

Within STEM domains at present, considerable attention and investment is currently being focussed on trying to create systems of machine learning that will replicate characteristics of natural languages. However, Chomsky's response to a parallel marketing of a contemporary acceleration of developments related to 'artificial intelligence' [AI] based on machine learning by companies such as 'Open AI' has been sceptical. One of the most prominent of these is OpenAI's Generative Pre-trained Programming language [GP-3] with the latest iteration of the system, known as 'DALLE 2', functions by transforming text prompts into images.⁷

Notwithstanding his endorsement of the need for ongoing speculative enquiry and 'experimentation', Chomsky has raised important questions about the potential of the 'GPT-3' system to 'go anywhere beyond a condition of 'anything goes.' As cognitive linguist, Gary Marcus has noted, Chomsky is highly resistant to the 'easiness' with which such systems appear to behave:

if Chomsky's more than a little disappointed about by the attention surrounding systems like GPT-3, it's because all this emphasis on statistical machines has distracted away from the incredibly important questions about the very nature of human language and

⁶ Bronac Ferran, *The Smell of Ink & Soil: The Story of [Edition]Hansjörg Mayer*, (Köln: Buchhandlung Walther König, 2017).

⁷ These applications are explained further at the Open AI website: <https://openai.com/blog/openai-api/> and <https://openai.com/api/>; [accessed 4.11.2022].

cognition that he spent his career rightly trying to call attention to. His questions still deserve answers, and it is difficult to see how GPT-3 casts any light on them. Large language models can, parasitically, glom onto human data, but they could glom onto any other data set just as well (e.g. programming languages); as such, they tell us far too little about how humans have come to be what they are.

Marcus has added, ‘it becomes apparent that however good their impression of the statistics of human text might be, their comprehension of the world is scattershot, bound to the particulars of what input they are trained on, and lacking in genuine abstraction.’⁸

Meanwhile, interviewed in the nineteen seventies, Chomsky made reference both to ‘intuitive, unconscious knowledge’ and to ‘intrinsic properties of mind’ as influences on the generation of human language.⁹ Earlier in the decade, contributing to a 1972 seminar in New York on remodelling universities, Paz had noted, ‘Chomsky thinks that poetry in some way is a linguistic deviation, which could say that every time there appears a new poem we are seeing a transgression of language: a creative transgression of language’. He continued:

If we apply this idea of transgression, linked with values to social practice, we will find the same thing. New values appear when there is a new force in society that is breaking society and bringing new values. Then new values are first critical, and in our society creativity is linked with criticism. New values mean not only, of course, they are hidden in society, but in order to appear there must be a criticism of society and a transgression, as in poetry.

⁸ This discussion is documented at Gary Marcus’s Substack site at:

<https://garymarcus.substack.com/p/noam-chomsky-and-gpt-3>; [accessed 4.11.2022].

⁹ Noam Chomsky, in *Language and Responsibility: Based on Conversations with Mitsou Ronat*, (West Sussex: The Harvester Press, 1979), p. 109; p.126:: Chomsky describes his own proposition of a generative grammar as a search for ‘underlying principles that was developed in opposition to structuralism, that took into account ‘intuitive, unconscious knowledge’ that cannot be represented by ‘finite state Markov sources’.

Paz concluded: 'What I think the new university must, in some way, embody is this critical spirit, which is also a creative spirit – this spirit of transgression'.¹⁰

To transgress in a geological context can apply to how the sea might rise and overrun the land. In a cultural sense, it can be a deliberate breaking or violating of what are often unwritten codes, in the spirit of provoking and challenging. As Paz is signalling, the positive effects of transgression are connected to the evolving of a located or situated critique, that recognises the territory or domain of its intervention. And sets out to change it.

Chomsky, meanwhile, in the fifties, transgressed patterns of hitherto dominant thinking of human language formation as behaviourist in its orientation. In *Syntactic Structures*, published in 1957, Chomsky differentiated between 'some formalized system of mathematics' that he noted can 'be considered a language' and natural languages (those that humans speak or write).¹¹ His proposition of a 'generative grammar' involved a system of 'rules' that has been explained as follows: 'in order for a theory of language to be productive [...] at least some of its principles or rules must be recursive' meaning that 'it can be applied to its own output an indefinite number of times, yielding a total output that is potentially infinite'. For Chomsky such principles were 'transformational in the sense that they account for the syntactic and semantic properties of sentences by means of modifications of the structure of a phrase in the course of its generation'.¹² His ideas were powerfully influential on others, including artists in the sixties who worked with textual components, including the late Lawrence Weiner, who became known for a highly reductive and recursive use of language within visual practices.

Chomsky's ideas were also referenced by a pioneering figure in interdisciplinary theory and practices, the Stuttgart-based philosopher and scientist, Max Bense, who was Mayer's early teacher and mentor. In February 1965, in the world's first text about computer graphics as art, Bense drew an analogy with Chomsky's 'generative grammar' in introducing the concept of 'a generative aesthetics' in describing what

¹⁰ Octavio Paz, cited in *The Universitas Project, Solutions for a Post-Technological Society*, The Museum of Modern Art, New York, p. 321.

¹¹ Noam Chomsky, *Syntactic Structures*, (The Hague, Paris: Mouton, 1957, this version 1972), p. 13

¹² This is adapted from Noam Chomsky, 'Rule Systems in Chomskyan Generative Grammar' at the Encyclopedia Britannica site, at <https://www.britannica.com/biography/Noam-Chomsky/Rule-systems-in-Chomskyan-theories-of-language>; [accessed 12.3.2022].

occurred when a Siemens employee, Georg Nees, devised a program to create random computer plotter drawings.¹³

In late 1964, in an article published in the *Times Literary Supplement* in London, Bense had already made reference to a new 'artificial poetry' with correspondences to 'abstract theories of automata and categories mainly worked out by Russian mathematicians' earlier in the century. He duly argued for the necessity to break with conventions of sentiment in literature: 'Experimental poetry is often accused of being dry and boring, And of course it is true that we are less moved and affected by the products of abstract, rational imagination, which spring not so much from a background of true-to-life emotion as from an atmosphere of theorizing, than we are by works that result from life and feeling'. He presciently connected the apparent diminishing of the poetic element' in a seemingly 'artificial poetry' to the 'dwindling of vital human existence which is unavoidable in any technological civilization'.¹⁴

Moreover, he saw the 'Programming of new texts, preferably by means of computer programming language' as 'among the constructive aims of the synthetic and experimental theory of text applied to what we might call the "artificial poetry" of the future'.¹⁵ In the late forties, the founder of 'Information Theory', Claude Shannon, had also referred to 'artificial languages' when writing on applying modes of statistical frequency analysis to the reading of texts.¹⁶

So too in the late thirties, French writer and doctor, Paul Valéry, had pointed to the symbolic language used in the latter decades of the nineteenth century by poet Stéphane Mallarmé, describing Mallarmé's approach to syntax as resembling 'the attitudes of men who in algebra have examined the science of forms and the symbolical part of the art of mathematics'. Perceptively, Valéry added that,

¹³ Max Bense, 'projekte generativer ästhetik' [project of generative aesthetics], originally published in rot no. 19 (February 1965), eds. Max Bense and Elisabeth Walther, np., (author trans.), Bense stated 'Generative aesthetics is therefore an analogue of generative grammar (Chomsky) in that it is, like these, sets of a grammatical scheme and provides realizations of an aesthetic structure'.

¹⁴ Max Bense, 'The Theory and Practice of Text', *TLS*, 4 September 1964, pp. 788-789 (p. 789).

¹⁵ *Ibid.* p. 788.

¹⁶ Claude Shannon, *A Mathematical Theory of Communication*, Reprinted with corrections from *The Bell System Technical Journal*, Vol. 27, pp. 379-423, 623-656, July, October, 1948, <https://people.math.harvard.edu/~ctm/home/text/others/shannon/entropy/entropy.pdf>; [accessed 4.11.2022].

moreover: 'this type of attention makes the structure of expressions more felt and more interesting than their significance of value'.¹⁷

For Mallarmé, meanwhile, the extended blankness of the graphic space of the poem made a non-verbal contribution to the action of the work, shifting its meaning to the perceptual field of the viewer and to the design of the poem on the page. In so doing, he laid down the foundations for many works in the century that followed. The Preface to Mallarmé's 'Un Coup de Dés n'abolir le hasard' has close pertinence to later works in areas of concrete, digital and visual poetry. Identifying the 'importance of the 'blanks' at first glance' within his poem, Mallarmé observed:

the versification demands them, as a surrounding silence, to the extent that a fragment, lyrical or of a few beats, occupies, in its midst, a third of the space of paper: I do not transgress the measure, only disperse it. The paper intervenes each time as an image, of itself, ends or begins once more, accepting a succession of others, and, since, as ever, it does nothing, of regular sonorous lines or verse – rather prismatic subdivisions of the Idea, the instant they appear, and as long as they last, in some precise intellectual performance, that is in variable positions, nearer to or further from the implicit guiding thread, because of the verisimilitude the text imposes. The literary value, if I am allowed to say so, of this print-less distance which mentally separates groups of words or words themselves, is to periodically accelerate or slow the movement, the scansion, the sequence even, given one's simultaneous sight of the page¹⁸

Mallarmé is expressing an awareness that the layout of the text affected the contingency of its reception. His reference to the term 'print-less' also establishes a framing of negation as a critical element of the poem's composition and indeed its perception by the reader or viewer.¹⁹

¹⁷ Paul Valéry, 'Leonardo Poe Mallarmé' in *The Collected Works of Paul Valéry* (ed) Jackson Matthews. (trans.). Malcolm Cowley and James R. Lawler. (London: Routledge, and Kegan Paul, 1972). pp. 242-243.

¹⁸ This translation of lines from the Preface to Mallarmé's 'Un Coup de Dés...' is from the Electronic Poetry Center archive open resource at: <http://www.writing.upenn.edu/library/Mallarme.html>; latest update Charles Bernstein, March 2016. [accessed 12.5.2018].

¹⁹ Ibid.

In my recent writings, I have been exploring ways that the relational turn within Mallarmé's poetic practice, combined with properties of generative and transformational grammar that Chomsky observed within his study of the English language, found form in the poetic practices of Mayer and his collaborators. Mayer became known for his frequent use of the geometrical Futura typeface, invented by Paul Renner and introduced in Germany in 1926. For Mayer, the typeface's line and circle was the equivalent of binary encoding in allowing everything, 'the whole universe', to find expression.²⁰ His use of this typeface in a consistent way for works by others contributed to a sense of integral and internal relation among poems by different poets. A sense of a projection forward over time from one era to another was made visible in language.

In network generating ways, outside established literary circuits, poets involved in this movement created multiple small-press publications that they circulated to each other and to a small number of independent outlets internationally, using systems of postage and occasional face to face meetings. A related cross-pollination of approach to formats and to design also became visible, forming hybrid sites of symbiosis also with synchronous developments in early computer graphics, design, and aspects of visual art practices in the same period.

Yet, differently from the programmatic turn in early computer art, poets were exercising a mode of doubling: relinquishing a self-expressiveness and sometimes even the word itself in favour of letters, lines, numbers and signs (as is prevalent in Mayer's solo works). Behind the seeming pared down, neutralising aspects of the typographical layout of texts, was a depth of entwined interpersonal relations, becoming in a sense the dynamic 'soil' out of which what appeared to be a mechanical approach to poetic form emerged. This also found form in overprinted textures that Mayer generated iteratively over sequences of pages. Related techniques were also substantially practised also by British-born poet, Bob Cobbing, who made what he called 'dirty concrete', using degrees of deliberate illegibility, providing a counterpoint to the artificial clarity of calculated programmatic structures that were simultaneously being produced.

This period of emergence during the sixties became also the first phase of development of overlapping, interdisciplinary tendencies within the arts, as addressed in a double issue of the Taylor & Francis *Interdisciplinary Science*

²⁰ Bronac Ferran, The Movement of the Poem in the 1960s: from circle and line to zero and one, from concretion to computation, *Interdisciplinary Science Reviews*, 42:1-2, 127-143, DOI: [10.1080/03080188.2017.1297168](https://doi.org/10.1080/03080188.2017.1297168) (<https://doi.org/10.1080/03080188.2017.1297168>) [open access].

Reviews Journal, co-edited by Dr. Elizabeth Fisher and myself, under the title of ‘The Experimental Generation: Networks of Interdisciplinary Praxis in British Art, 1950-1970’ (2017).²¹ Among the contributors were Jasia Reichardt – organiser of the Cybernetic Serendipity exhibition at the ICA in London in 1968 and Liliane Lijn – creator of the world’s first electrically-based poem-machine in Paris in 1962, as well as Stephen Bann, Jonathan Benthall, Paul Brown, Ernest Edmonds, Reg Gadney, George Mallen and Stephen Willats. We included also a series of essays and case studies by a younger generation of academic and independent researchers, including Nick Lambert on Roy Ascott and his influence at Ealing College of Art, Greg Thomas, on poet and monk, Dom Sylvester Houédard, key observer of the impact of media and communication theories on artistic practices in the sixties and Neal White on how his own contemporary practice-led research has drawn on the earlier exemplar of John Latham and the Artists Placement Group.²²

We stressed in our introduction the revolutionary nature of what was then taking place, exploring an apparent convergence of interest in art and science around the notion of social responsibility in the 1960s:

Revolutionary social change was at the forefront of many people’s minds in this period: whether it involved civil rights or resistance to nuclear weapons, ethics or artistic expression, what we heard at this event was the sense of a new inter- disciplinary dynamic drawing the arts and sciences together as part of a wide-ranging revolutionary agenda. Within the decade, artistic practice had expanded beyond all boundaries. New collaborative ways of working, knowledge sharing and production had become commonplace and no discipline or situation was out of bounds for artists. How did this happen? How did ideas, methods and concepts from science and technology and other disciplinary fields infuse and expand arts practice in post-war Britain? We acknowledged at the outset the impossibility within the scope of the Journal of mapping the full breadth and width of interdisciplinary emergence during this period. Our focus there- fore has been on case studies of activities, people and projects that exemplify and encapsulate aspects of the exchanges and cross-fertilization that took place in diverse contexts. We invited contributors to describe and reflect on ways in which knowledge was

²¹ See full list of content within the double issue of the journal at the Taylor & Francis ISR website: <https://www.tandfonline.com/toc/yisr20/42/1-2?nav=tocList>; [accessed 4.11.2022].

²² Ibid.

produced and transposed at both individual and collective levels. One of our primary aims was to reveal networks and nodes of activity often overlooked when viewed through the lens of singular disciplinary silos.²³

The issue was dedicated to the founder of ‘auto-destructive’ and ‘auto-creative’ art, Jewish-born artist and theorist Gustav Metzger, who died in London in 2017, whose active transgression of art-form and societal boundaries proved deeply influential on both his own contemporaries and indeed a generation of contemporary artists who followed. Having been part of CND protests from the outset, Metzger spent most of his later years campaigning against ‘species destruction’ and strongly urging those who came after him to ‘Remember Nature’:

<https://remembernaturegustavmetzger.wordpress.com/about/>.

Metzger was active from the late fifties onwards in authoring a series of manifestos in which he used language carefully and persuasively to awaken people to the potential for mass destruction that automated technological systems might bring in train, as well to the importance of garnering collectivist actions with scientists who shared equivalent political concerns about the implications of so-called progress.

Indeed, Metzger, and many others featured in the ISR Journal (as well as those we did not have space to include) were taking the first steps in this country in the direction of genuine interdisciplinary thinking. This involved stepping into spaces without precedent or definition, that took account of technological change and, informed by what was happening, creating new languages and at times also forming strategies of resistance that might demarcate a path for others to follow. In a sense this was making real the shifting of social, and cultural values, to which, in exactly the same period, Paz was pointing. It also had transgressive implications in relation to behavioural and societal codes, as has been articulated in various texts and projects by the artist, Stephen Willats.

Recently featured in an archival exhibition at the Bonington Gallery in Nottingham Trent University, Willats has recalled working in the sixties and early seventies in a series of art schools, when: ‘all strategies were open and valid to the artist to engage with, and transform’. As the exhibition in Nottingham reflected, Willats came to perceive that ‘a social process could be considered a work of art, an event based process that involved different channels of communication, moving forward in

²³ See Bronac Ferran and Elizabeth Fisher, ‘The Experimental Generation’ Introduction to , available (open access) at: <https://www.tandfonline.com/doi/full/10.1080/03080188.2017.1297167>;

time'. He sought to make works that would become 'a sign post for other artists and practitioners for the future.' Within his works, not least his highly distinctive visual diagrams and process-drawings, we see how he incorporated data and cues and views gathered from social interaction with people, often those living in marginal and edge-zones within cities, so that: 'Instead of the audience acquiring the language of the artist's world, the artist embodied their existing language into the work.'²⁴

Pursuing the task of 'jettisoning of object-bound art that was enclosed within the exclusivity of art galleries', when working in the Fine Art Department at the then Trent Polytechnic in 1971-1972, Willats assembled a 'think-tank' of students and experts from diverse domains of advertising, architecture, cybernetics, and systems theory. Together they sought to move away from 'the language island' of the art school and took art into the public domain, driving to housing estates in Nottingham knocking on doors with questionnaires, inviting people to share their views on various subjects.²⁵ One of the projects involved an art school participant dressing up in a silver space suit and being introduced to people as 'The Man From The Twenty First Century'.²⁶ Willats has further commented that the degrees of creative fermentation and radical reinvention of approaches to teaching and to the making of art itself within British art schools in the sixties is a story that is incomplete so far in its telling.²⁷

Indeed, there seem to me to be several gaps in existing repositories of knowledge within academia with respect to the first phase of emergence of interdisciplinary tendencies within British art and culture from the fifties onwards. Addressing this absence seems now crucial. This historical deficit is growing in importance in a context when it is evident that the arts and humanities in general face exceptional challenges.²⁸

²⁴ Stephen Willats in: *Social Resource Project for Tennis Clubs, Nottingham 1971/72*, Stephen Willats, 2022, Bonington Gallery; published by Nottingham Trent University. p.1; see also Bronac Ferran, Review of Stephen Willats: *Social Resource Project for Tennis Clubs*, in Studio International, available at: <https://www.studiointernational.com/index.php/stephen-willats-social-resource-project-for-tennis-clubs-review-bonington-gallery-nottingham-trent-university>; [accessed 4.11.2022].

²⁵ Stephen Willats. in: *Social Resource Project for Tennis Clubs*, Nottingham 1971/72, Stephen Willats, 2022, Bonington Gallery; published by Nottingham Trent University, p.1.

²⁶ See Stephen Willats' website for further detail on this project: <http://stephenwillats.com/work/man-twenty-first-century/>; [accessed 4.11.2022].

²⁷ Stated in interview with author, September 2022, London.

²⁸ Related commentary can be found, for example, at: Matt Bates, 'A National Disgrace', in The Bookseller <https://www.thebookseller.com/comment/a-national-disgrace>;

Whilst STEM subject areas are priorities for government funding, in contrast subjects within arts and humanities domains, such as English literature and philosophy, that are relatively open-ended with respect to defined career paths, face reduction of funding and enhanced risk of closure. Such areas of study, less directly geared to adding financial value to the national economy, appear increasingly like slipstreams in a policy agenda flowing irreversibly in market-led directions.

Paradoxically, in considering even briefly a list of the most daunting twenty first century global challenges, it becomes swiftly evident that many of these fields that call for the binding together aspects of STEM domains with areas of art, humanities and social sciences. We might add to the already cited area of machine learning, the ultimately human-centred sphere of medicine --- with its plurality of subdomains – that call for empathetic as well as analytical approaches to the human subject. In all of these domains, issues of ethics, and questions of ownership of data and the position of the ‘data subject’ within a systems-based praxis are of growing importance.

Indeed, a restorative approach to the humanities that recuperates knowledge and ideas advanced by leading figures engaging with scientific and technological shifts at the first phase of emergence seems to be now called for: in so doing, attention might be given to scholarly assimilation of dispersed and distributed primary and secondary sources, the existence of which may prove to be vital in shaping a new role for an evolving humanities in dialogue with other disciplinary arenas in future decades. But what would a scholarly recuperation of the relational edges and rhizomatic roots of interstitial practices look like? Do we need a brave new *Gathering* together of this material, in a way that might aesthetically fit with its content and context? Where would we look for the ‘new conceptual architects’ of such exchanges? Is there any room for ‘60s art school’ wildness within today’s academy?

[accessed 4.11.2022]; see also other related coverage of cuts at <https://www.history-uk.ac.uk/2022/05/18/statement-on-the-latest-course-closures-and-redundancies-in-the-arts-and-humanities/>; <https://www.wandsworthguardian.co.uk/news/20579680.roehampton-university-close-humanities-courses-will-see-jobs-axed/>;



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