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Science, Authoritarianism and the Authority of the Good

This paper examines the way in which ‘authority’ and ‘authoritarianism’ have been conflated in contemporary philosophical thought. More specifically, it will show how the psycho-social critique of political authority developed by the Frankfurt School in the 1930s established a paradigm for the critique of political authority as ‘authoritarian irrationalism’. The paper goes on to explore the limitations of this paradigm in the contemporary era, where political authority has been largely supplanted by the epistemic and ontological authority of techno-science (that contemporary liberalism uses in order to “present itself” as a system without any dominant mode of political authority). The paper will conclude with a plea for contemporary philosophers to recognise the significance of the ‘authority of the good’ as means for ensuring more sustainable and convivial modes of techno-scientific development.

1. Authoritarian Irrationalism and the 20th Century: Social Crises and the Pathologies of Authority

One of the most influential intellectual developments of the 20th century was the unleashing of a critique of what has since become known as ‘authoritarian irrationalism’ by various members of the Frankfurt School. Often simply referred to as ‘authoritarianism’ – due to the enthusiastic reception of Adorno’s famous study of the authoritarian personality¹ – this critique drew the attention of a new generation of liberal-leaning intellectuals to the existence of a uniquely modern social formation based upon an unquestioned and unquestioning mass allegiance to the authority of modern political institutions; especially the institution of the modern nation / state (as it was somehow mysteriously encapsulated in the paternalistic personality of the charismatic political leader)². As is well known, the wider context for this mode of social critique was the crisis of capitalism that ‘pathologised’ the polity of western nations in the 1930s; especially the failure of this crisis to engender the ‘socialist’ modes of political economic organisation portended by Marx’s techno-economic philosophy of historical development.

1 T. Adorno et.al, *The Authoritarian Personality*, Norton, New York 1993. See also D. Held, *Introduction to Critical Theory: Horkheimer to Habermas*, University of Californian Press, Berkeley 1980.

2 Hence pre-war forms of authoritarianism can be justifiably viewed as ‘ceasero-statist’.

More specifically, the key question posed by the Frankfurt School was why, given the manifest existence of the objective material conditions for the evolution of socialism – out of a seemingly historically decisive and apocalyptic crisis of capitalism – that socialism had failed to appear; there emerging instead only virulent forms of authoritarianism, exhibited as hyper-nationalism, cultic political irrationalism and racialised conceptions of the international order; that we now refer to collectively as ‘fascism’, but are probably better referred to as ‘authoritarian statism’. As we might expect given the Frankfurt’s School’s intellectual inheritance, their explanation for the emergence of authoritarianism relied upon a synthesis of the political economy of Marx and orthodox Freudian psychoanalysis; that in conjunction generated an exposition of the central political crisis of the century and the failure of history at this juncture in terms of monopoly capitalism’s ability to engender specific psychological weaknesses in the ‘new masses’. More specifically, in this regard it was claimed that the 20th century individual, his ego weakened due to the decline of the traditional authority structures embedded in the family by the rise of monopoly capitalism and the state, had become infantilised in craving the security of figures of political authority. In this account, authority represents a pathological substitute for unmet satisfactions of various kinds, the political leader in particular being conceived as an ‘ersatz father’ whose authority satisfies needs for identity and security. In this vein, the primary cause of authoritarianism was located in the realms of political unconscious; in repressed hostility and aggression towards paternal authority that was converted by a process of ‘reaction formation’ into ‘political love’ (and where the hierarchical, rigid and stereotyping psychologies of the masses were viewed as the psychic cost paid for this repression)³.

3 In broader sociological terms, for Frankfurt school theorists – such as Pollock in particular – the development of authoritarianism must be understood in the context of the transition from *liberal to monopoly* capitalism in the early part of the last century. By the 1930s, the ‘free market’ liberal capitalism of the nineteenth century had completely collapsed and there emerged a new form of capitalism that was premised upon the efficiency of bureaucratic *hierarchies* -not markets. This was the age of the emergence of the giant Fordist factory with its economies of scale. The received economic wisdom of the time was largely *interventionist*; that is, that the most efficient and effective way of allocating resources was via either direct state control of the entire economy – the Soviet model – or by state ownership of the key monopolies in the economy – Social Democracy. In America, this was the period of the emergence of the mass production-mass consumption society – where a single firm produced a single standardised product for the mass market and where the government increasingly ‘intervened’ in the economy in order to guarantee appropriate levels of economic demand. This was the high point of economic, social and cultural *modernism* such that Fascism, Communism and Social Democracy must all be seen as particular expressions of a certain will to *modernise* on the part of the different political classes in each state. In Germany, where the collapse of the old system was most marked and, at the popular level, most deeply felt, this trend towards increasing integration of economic functions within a single organisational logic, determined by the capitalist drive for economies of scale, took a peculiarly authoritarian political form. However, the authoritarian aspects of all three politico-economic systems are now evident, as each involved an attempt to regulate a reshape the economy by means of powerful political authorities.

Overall, the Frankfurt School claimed that in the 1930s we witnessed a trend was towards an increasing politicisation of capitalism alongside a general weakening the powers of reason and reflection. In conjunction, this created the need for a disciplinary society based upon mass-obedience to the authority of the state and mass-conformity to state-sanctioned forms of social and cultural conventionalisation⁴. As such, Adorno viewed authoritarianism 1930s-style as an attempt to eradicate 'difference' by means of grand totalitarian political projects that aimed to turn modern societies into super-extended families – the cost of which was that the individual was reduced to a banal and false self-identity through identification with generic culturally-specific concepts. In his view, authoritarianism flattens the moral landscape resulting in a certain indifference to the plight of the individual. It is under such conditions that a general positivism flourishes because it allows the other to be conceived as a specimen – a strange and less threatening curiosity whose primary relevance resides in an objectivity amenable to measurement and categorisation (and as I suggest below, this aspect of pre-war authoritarianism obtains for itself a significant amount of cultural autonomy and an enhanced role in the post-war political environment)⁵.

4 For both Reich and Fromm, authoritarianism has its origins in the peculiar pathologies of the German lower-middle class. They recognised that the German lower-middle class – from which, pre 1931, the National Socialist party gained most its support – in the context of narrowing pay and status differentials due to augmented power of organised labour, suffered from intense *status anxiety* (J. Bensman and A.J. Vidich, *Changes in the Lifestyles of American Classes* in A.J. Vidich (ed.), *The New Middle Classes: Lifestyles, Status Claims and Political Orientations*, Macmillan, London 1995). In their view it was this that was to eventually give rise to a demand for new hyper-authoritarian conservative political movements deemed capable of upholding these differentials. In Germany, in the late 1920s this politically powerful social class saw the entire basis of its ideology – an ideology that Elias calls an ideology of 'corpse like obedience' – totally undermined by the collapse of the German economy (see J. Fletcher, *Violence and Civilisation: An Introduction to the Work of Norbert Elias*, Polity, Cambridge 1997). This is why authoritarian modernity took such a pathological form in 1930s Germany (and provided the basis for the ideological articulation from authority to authoritarianism).

5 Historically, this authoritarianism led directly to Auschwitz in Adorno's view – the apotheosis of the irrationality of political positivism. For Adorno, the main masspsychological root of authoritarianism is a 'bourgeois coldness' on the part of latemodern individuals, something that can only be overcome by recognising the possibility of transcendence (see E. Hammer, *Adorno and Extreme Evil in Philosophy and Social Criticism*, Vol. 28, No. 4, pp. 75-93, 2000). For Adorno, it is Kantian philosophy – with its formalistic championing of the understanding over sensibility – that is the main source of intellectual succour to late-modern authoritarianism. For him, what lies behind the Kantian transcendental ego is a viciously self-interested bourgeois consciousness that worships those of more elevated status and despises those who occupy more subaltern positions. More specifically, for Adorno Kant's philosophy is the intellectual articulation of a pietist authoritarianism where any legitimate action is to be motivated by duty alone and exclusively concerned with the interior life divorced from concrete attachments in socio-historical contexts. As such, Kantian philosophy shows the extent to which authoritarianism, although objectively irrational, is capable of masquerading as the very apotheosis of a reason to a bourgeois consciousness constantly threatened with crisis. The modern philosophical neglect of the transcendent for Adorno is a terrible arrogation of philosophy (in that it takes the irrational world understood as rational to be *the* world). In his

In its development of a psycho-political critique of authority, Adorno's account stood apart from classically liberal critiques of authority – but in overall intellectual terms its wider intellectual effects were broadly the identical. Liberalism, from Rousseau onwards, had already presented itself as a critique of political authority, but in the 20th century this style of critique was sharpened and intensified by historical events. For many 20th century liberal political philosophers, the social and political pathologies of the early decades of that century were viewed as due to a profound irrationalism stemming from a pathological displacement of the true location of authority – understood to reside within the rational individual – onto objective objects and institutions (that now, in these schemes, become reduced to mere political fetishes). According to the liberal historian of ideas Isaiah Berlin, 20th century authoritarianism emerged out of a kind of 'existential epiphany' that Enlightenment forms of political freedom are in reality an illusion and that nature itself is the true and only source of political authority because only nature provides an automatic ground for a meaningful social differentiation, in this case between 'the strong' and 'the weak' (and thus nature is the only legitimate ground through which value-judgements can and should be formed)⁶. In his view, the cycles of birth, predation and death are for the authoritarian the basic pre-political authorities that condition and constrain the possibility of authentic thought and action (and in this sense, for the liberal philosopher the authoritarianism of the 1930s was primarily an 'authoritarian naturalism' and only secondarily an 'authoritarian statism'). As such, in this scheme, for the authoritarian the ideal of liberal democratic politics is based upon '[a] false sense of one's own wisdom and power, blind refusal to recognise the superiority either of other men or of institutions' that 'leads to the ridiculous mosaic of declarations of the rights of men and claptrap about liberty'⁷. Here the authoritarian is viewed as a worshipper of the political power inherent with nature itself – 'nature, cruel queen of all wisdom', as Hitler was to famously put it⁸.

view, the focus of the philosopher should be, rather, on the concrete suffering of the individual. For him it is authoritarianism which both instigates this suffering and that which disguises it as suffering. In this way, Adorno's critique of post-Auschwitz culture effectively amounts to a plea for a new metaphysics – for him a materialist metaphysics – that supports an ethics of transcendence. However, for him this redemptive metaphysics cannot resemble Platonism, but must be a 'metaphysics of the transitory' grounded in the mimetic acknowledgement of actual suffering. However, suffering does not make philosophical sense in isolation from a strong conception of the good.

6 I. Berlin, *The Crooked Timber of Humanity: Chapters in the History of Ideas*, John Murray, London 1990, pp. 91-174.

7 I. Berlin, 1990, p 149.

8 For Berlin, in the thinking of the authoritarian, the rationalist politics of modernity represents a disavowal of an 'ineluctable irrationality' underlying all of existence. Authoritarianism, in this sense, is linked to a 'mysticism of the political'. Modern democratic politics, because it neglects the direct and unmediated authority of the natural order – presupposed by all forms of politics – is viewed as both egotistical and absurd. In response, the pressing political project for the authoritarian is to impose order on liberalism's 'unnatural' chaos – by any means – in order to return political life to the purely naturalist orders that governed life in the past (and

Due in part to the joint effects of the combination these Marxist and liberal critiques, after the defeat of statist authoritarianism in 1945 all forms of belief in the intellectual significance of external authority were effectively stigmatised. From now on, it seemed as though to believe in the importance and/or necessity of authority in social and cultural life was to exhibit symptoms of an 'authoritarian personality' – a personality whose adherence to a sadomasochistic social and political misogyny generated a real and significant tendency towards proto-fascist political orientations.⁹

For many on and of the political left, the liberal pluralist state was to be viewed as the best antidote to this kind of authoritarianism and the guarantor of a what amounted to a new anti-authoritarian cult of personal autonomy – a kind of mass-psychological, mass-produced, liberalism through which an expressivist and stylized hyper-individualism, paradoxically, became a new conformity. In a sense, this political strategy clearly worked, because today not only has this form of authoritarianism largely disappeared from the western political landscape but also because now any intellectual appeal 'to authority' in western society is not only viewed as fallacious but incipiently pathological (as it seems inimical to the idea that individuals should be able to express and create themselves in the way that they desire in the context of their own 'lifestyles'). In ideological terms, as 'liberal subjects', westerners live in societies that are subject to a dilemmatic rather than a rigid, one dimensional political consciousness – and in this regard it is complexity, uncertainty and a nihilistic relativism that generally currently hold sway.¹⁰

contemporary authoritarians, have, somewhat paradoxically, looked to the state as the instrument to achieve this). Social life cannot be understood or explained by means of social or scientific theory (and thus altered, according to a political design) but can only be lived without reflection and thus cannot be explained as such but only *revealed* through the creative powers of the *artist*. (the most sacred of figures for this brand of authoritarian). Thus, overall, for Berlin, 20th century authoritarianism is the attempt to find a politics that is premised upon the brutal order of 'nature', and thus as a modern ideology it can be seen as peculiarly modern expression of the desire for a new kind of social order; a hybrid of modern statism and pre-modern paganism. According to this perspective, authoritarianism is mystical, aestheticist and statist.

9 In the case of Adorno, the solution to the problem of incipient authoritarian tendencies at large in culture was to identify these pathological personalities and 're-educate' them according to an interpretation of their 'real needs'; that is by appealing to a quasinnaturalistic conception of true 'underlying needs' that are not satisfied by the displaced 'substitute satisfactions' offered to them by forms of political authority. These needs were generally viewed as needs for personal and collective freedom that statist authoritarianism conditions individuals to fear. This clearly amounted to an attempt to link authority to ideology and the psychopathologies associated with the 'mass personality'. In this way, in its championing of a needs based conception of personal autonomy, its affinities with liberalism should be clear.

10 Michael Billig (see M. Billig, *Ideology and Social Psychology*, Routledge, London 1976) took issue with this claim and argued for the relative disappearance of authoritarianism as a political force after 1945 showing that it was a product of social and political forces at work at an earlier historical juncture. According to Billig, viewing the matter with the benefit of post-war liberal hindsight, it is a mistake to argue that the authoritarian personality amounts to a new modern anthropological type. Against this, he suggests that most of us today are deeply ambivalent about traditional authority figures and their expressed ideologies. More specifically,

Nevertheless, what cannot be denied is that the history of the 20th century, and its interpretation by leading Marxist and liberal intellectual commentators, has led to a default intellectual position that associates all forms of *authority* with *authoritarianism*; that is with cults of political personality, political irrationality and mass xenophobia – as well as the belief that although authoritarianism is now in abeyance, the world must be potentially on its guard against it.

2. Science as the New Authoritarianism

However, post-war liberalism has not engendered authoritarianism's wholesale disappearance – but merely its displacement onto other institutions and processes: especially the institutions associated with modern technoscience. This shift represents a mutation in the naturalist version of authoritarianism outlined above – from a vital and concrete to a more abstract and theoretical form of authoritarianism. In this way, authoritarianism has moved away from visible political arenas into less visible domains of theoretical knowledge where it often remains undetected, giving the appearance that contemporary societies lack an authoritative centre. However, in the irrational effects of this form of authority it is clearly discernible; especially in the techno-narcissisms of consumer society, the grotesquery that is bio-political genetic engineering and of course the threat to human life posed by industrial and military technologies. Today, it is the intensification of the connection between theoretical knowledge, innovation and state/market power that provides the bases for a new kind of political authority: one that, through technological applications

he argues that no one today subscribes to an ideological position *completely* as we are typically faced today with a complex socio-political situation that puts us in a *dilemma*. Billig's point is that, after the defeat of the politics of authoritarianism, we are all liberals now. Of course, Billig is correct in pointing out that there are real questions as to whether Frankfurt's School styles of analysis are still relevant today (as the statism of the 20th century gradually fades). However, he is mistaken, I believe, in claiming that in post-war 'liberal democratic societies' there has emerged a more 'democratic' type of personality that manifests a more open form of political consciousness that appreciates that it is always confronted with two sides of an idea (having to steer a liberal-centrist course between them). The post-war period was a period of relative economic stability that was underpinned not by the state as such but by significant intensification of technoscientific innovation. The resulting transformation in living standards significantly de-politicised the polity (and liberalism is in many ways a symptom of this). In defence of the Frankfurt School it must be pointed out that if this period of relative economic stability were to end, as it now may be doing, then the conditions for the reemergence of authoritarianism would again be present. Popular demands for a politics of order, social control and status-differentials would again form the basis of a (new) form of statist authoritarianism. However, such a development is not likely because both these positions misunderstand the role that modern science plays in providing an authoritarian securing of liberalism in contemporary societies. For any new form of authoritarian irrationalism today would have to meet the tribunal not of ideology but of the authoritarian rationalism of modern science. It is when the authority of science is challenged that we can see the authoritarian dimensions of contemporary liberalism. Liberalism is only liberal until science is challenged.

– both military and domestic – in conjunction with a general scientific metaphysics delivers a new ‘authoritative ground’ for contemporary thought and action¹¹. More generally, it is theoretical technoscience that provides the senses of security and historical significance that were once provided by Fuhrers (to the extent that, as the popular level, the distinction between theoretical knowledge and ‘cult’ often collapses; as can be seen in popular cults that are now associated with the popular reception of quantum mechanics). Today, we live in age of *scientia mensura* – where theoretical technoscience has become the ‘measure of all things’. As a consequence, the question that needs to be posed today is how we are to conceive of modern technoscience in ‘properly philosophical terms’, especially given that modern science now claims its legitimacy on the basis of a new kind political authority that satisfies a deep psycho-political need (the need for modern sense of significance and security through abstract forms of justification)¹². In contemporary society we can see that it is no longer political movements but techno-theoretical knowledge that allows both the state and the market to mobilise individuals and groups in ways that resonate with the former’s overall strategic goals. This is evident not only at the level of everyday life – that is now increasingly ‘self-regulated’ by means medical techno-knowledge – but also at higher levels of sociological analysis where Darwinism and scientific cosmologies interact to ‘authorise’ a hyper-competitive liberal cosmopolitanism. In this way, the incorporation of modern science into wider systems of money and power is impacting on how we conceive of science itself – as for us, the scientific concept is no longer the purely speculative affair of the Hegelian era but has become thoroughly strategic (as Foucault observed).

In the light of this shift that involves a fusion of science with technology, economics and political power, a key premise that lay behind the philosophical discourses of modernity has been called into question – often under the sign of that unfortunate term ‘the postmodern’. Here a general philosophical strategy was developed, a kind of anti-science that attempted to sever the connection between scientific knowledge and philosophical truth¹³. As has been well documented, postmodern critiques

11 Due to modern science’s association with the modern state, an understanding of the social function of knowledge has now become central to any adequate understanding of contemporary modernity. Broadly put, it has become important to understand how scientific knowledge is currently deployed in order to cast an image of the modern state as an instrument social and economic progress. Today, science is increasingly justified in terms of its ability to cast the modern state in such a light (and this is why the social and political hierarchies between the different sciences are now in a constant state of flux). This represents a form of scientific justification that is very different to that offered in most philosophical textbooks.

12 This is not to say that the authority of modern science was not significantly weakened by the end of the 20th century. Various scandals undermined the authority of science in some quarters – giving rise to a new forms social critique alongside new forms of authoritarianism that display a striking resemblance to those that infected the political cultures of the 1930s (one thinks here immediately of the various ‘new age’ spiritual tendencies that occupy a prominent position in some ecological movements).

13 Postmodern critiques of science in fact often blended into ‘new ageisms’ of various kinds, many of which represented an attempt to return to the older forms of authoritarianism that defined the pre-war world. In some cases the reaction against scientific authority found

of science supported a set of critical positions vis-à-vis scientific knowledge and suggested that scientific authority needs to be exposed to a new kind of democratic scrutiny. The overall aim of these critiques was to show that scientific knowledge represents only one kind of understanding and to this extent theoretical science cannot pretend to authorise contemporary liberalism as a mono-epistemological way of life (as it must make space for epistemological and conceptual alterity). In this way, such critiques show the extent to which abstract scientific conceptions of the world have become, for the first time, a phenomenon of integrated within the conceptuality of the life-world – and as such the ancient distinction between *doxa* and *theoria*, so central to very idea of western philosophy, appears to break down. For the Enlightenment philosophers, scientific knowledge had to be seen as something radically different, in terms of both cognitive content and social role, from ordinary ‘belief’. This led eventually to the infamous ‘demarcation problem’ in philosophy of science: the problem of how to differentiate scientific knowledge from its counterfeit versions. In general, in dealing with this problem modern philosophy has followed Descartes in appealing to an idea of ‘method’. A method, conceived as a route to knowledge that is both logically valid and practically reliable, was viewed as the keystone to understanding the true nature of science and the basis for its general epistemic justification. Method, in this scheme, is what makes epistemological consensus – and thus intellectual universalism – possible; for science cannot be ‘science’ if its modes of theorisation are rendered essentially particular. In this way, science, ‘as method’, is seen as guaranteeing an authentic epistemology because, as Rorty put it, ‘[t]he dominating notion of epistemology is that to be rational, to be fully human, to do what we ought, we need to be able to find agreement with other human beings. To construct an epistemology is to find maximum amount of common ground with others. The assumption that an epistemology can be constructed is that such a common ground exists’¹⁴. However, in contrast to this, post-modern critiques of theoretical science recognised that science can no longer be justified in terms of its methodological rigour but only in terms of its wider performativity – that is, the extent that it can be socially *applied* as an intellectual or material technology. Such accounts recognise that science today must justify itself *externally* because its theoretical claims must resonate with the social, cultural and political demands of the era if it is to be taken seriously and maintain its position of authority¹⁵. In this way, postmodernism correctly viewed

expression as a neo-pagan attitude (that typically took the form of an anti-Abrahamic metaphysics that aimed for a national/global ‘spiritual reawakening’ beyond socialism, capitalism, liberalism and parliamentary democracy (see G. Dahl, *Will The Other God Fail Again? On the Possible Return of the Conservative Revolution in Theory, Culture and Society*, Vol. 13. No. 1, pp. 32-47, 1996). However, such movements often tacitly accepted the authority of contemporary science, especially in its advocacy of quantum mechanical ideas where the cosmos is conceived of as interconnected energy (see P. Heelas, *The New Age Movement*, Blackwell, Oxford 1996).

14 R. Rorty, *Philosophy and the Mirror of Nature*, Princeton University Press, Princeton, 1979, p. 316.

15 Today, science is widely believed because it is a bulwark against religious reawakenings – something that creates a deep anxiety in many of those who desire to avoid cosmological re-

science as part of a wider social/political project intent on legitimating a particular social order¹⁶. Scientific knowledge, for the postmodern science critic, must be unmasked as a player in a wider political game. Lyotard was a key thinker in this regard – for whom modern techno-science was in reality neither true nor false but rather just another story about the world: a narrative that poses as the highest level/most fundamental narrative (or ‘*metanarrative*’ in Lyotard’s terminology)¹⁷. In response to this the alternative task set out for the postmodern science critic was to champion counter-scientific forms of inquiry – typically ones based upon literary or affective modes of understanding (that were somehow, in a quasi-romantic vein, viewed as more ‘fundamental’). This was the basic error of the postmodern and one that, in a reversal of Lyotard, has left most incredulous about its own irrationalism.

Overall, postmodern critiques of science amounted to an attempt to forge a new epistemological conception of modern science that reconceived of theoretical knowledge in terms of a wider social epistemology. Another key philosopher here was the later Wittgenstein, whose last reflections on epistemology – published as *On Certainty* – revealed the extent to which general scientific claims about the world had, by the mid 20th century, become so deeply socially and culturally entrenched that they had taken on the status of ‘a certainty’ that once attached to metaphysical propositions¹⁸. Theoretical science, in Wittgenstein’s view, had become absolutely integral to the very *a priori* framework through which all kinds of knowledge claims can be adjudicated. In this way, for Wittgenstein, modern science, in terms of its most basic theoretical claims, is no longer a set of truths but rather part of the very social grammar of modern life. We might say that its authority is now such that it forms a modern *habitus* within which all our judgements are given both a specific sense and significance. As such, we can no longer say that science is strictly true – as truth itself now presupposes the scientific ‘world-picture’. As a consequence, theoretical science has become ‘a rule’ and is no longer a set of empirical claims; an authority rather than a set of general theoretical assertions about how the world fundamentally is. Wittgenstein thus recognized that by the mid 20th century scientific knowledge had become so deeply conventionalized and routinised that it had become true almost by definition – to the extent scientific

positionings of self and society. Thus contrary to received opinion, popular belief in science is not the cause of decline of religious belief, but rather a symptom of its global reappearance.

16 Many have drawn attention to what might be termed the epistemological *aporias* of theoretical knowledge: if scientific knowledge is socially *produced* by concrete actors in a social setting, what then is the difference between knowledge and opinion? Do *all* attempts to make sense of the world produce theoretical knowledge? If so, knowledge must now be conceived in the plural, as ‘knowledges’. Thus we must ask with respect to everyday knowledge and scientific knowledge ‘where do we draw the line?’ Can we talk about *science* in the traditional sense anymore? The spectre of relativism looms here for many, but this is more accurately viewed as a problem of how to find scientific justifications for everyday forms of belief (and *vice versa*).

17 J.F. Lyotard, *The Postmodern Condition: A Report on Knowledge*, Manchester University Press, Manchester 1979.

18 L. Wittgenstein, *On Certainty*, Blackwell, Oxford 1969.

truth is no longer contingent but in some sense necessary (that is true in all possible modern worlds¹⁹. After Wittgenstein, we might say that the modernist claim that ‘modern scientific theories are true’ has become tautological at the popular everyday level – and to question the authority of science is to immediately reduce the argument to absurdity. Thus, when science is understood in terms of a Wittgensteinian conception of social philosophy it is thus difficult to specify the distinctly ‘rational’, ‘objective’, or ‘truth-oriented’ character of the scientific mind. As one recent social epistemologist put it, ‘it is not that scientists are less rational than the rest of humanity: rather they are not *more* rational’²⁰. Science has become, we might say, a way of life that all modern individuals participate in and as such its rationality is on the same level as the mundane practical rationalities that govern everyday life.

However, postmodern attempts to critique the authority of modern science in the name of suppressed textuality and affectivity failed to recognise both the depth and the extent of scientific authority in the latter part of the 20th century and also the way that scientific institutions are capable of exercising this authority when they perceive a cultural threat. Nowhere was the more evident in the so-called *Sokal Affair*. In 1996 Alain Sokal – a Belgian physicist – triggered the so-called ‘science wars’ by submitting a hoax article to the postmodern journal *Social Text* ‘defending’ the view that quantum physics can only be understood in terms of a ‘postmodern’ set of philosophical sensibilities – that is in terms of a broadly social epistemology. However, its subsequent exposure as a deliberate hoax reveals the precise nature of scientific authority very clearly. For Sokal’s critique mobilised the authority of science by appealing the contemporary scientific *a priori* in order to satirise the very idea of the post-modern itself – something from which the latter has failed to recover (in my view). The post-modern critique of scientific authority was thus easily put down by means of a tactics of ‘hilarity and dismay’ – a rhetorical *reductio ad absurdum* that mobilised the implicit tautology ‘science is rational’ to devastating political effect²¹. In this way Sokal’s reaction to the attack on scientific authority can be seen as evidence of a powerful ‘defensive’ machinery capable of being deployed by institutionalised science in order to protect its cultural authority of science from external critique. The power of this machinery shows the extent to which the authority of science is such that no other disciplines can displace its command of the epistemological terrain (showing that science is now probably immune to purely intellectual forms of critique).

19 S. Kripke, *Naming and Necessity*, Blackwell, Oxford, 1982.

20 S. Fuller, *The Science Wars: Who Exactly Is the Enemy?* in *Social Epistemology*, Vol. 13, Nos. ¾, pp. 243-249; 1999, original emphasis.

21 A. Sokal and J. Bricmont, *Intellectual Impostures*, Profile Books, London 1998, p. 3

3. The Good and the Limits of Science: Beyond Scientific Authoritarianism

This is not to say that postmodern forms of science critique were without their merits. Their interventions were both timely and extremely important, and they drew attention to the way in which nature of scientific knowledge had changed in quite fundamental ways in the latter decades of the 20th century. The tinkerer scientist had now become the scientific consultant – the figure of Oppenheimer had replaced that of Galileo as the key personification of modern scientist (and as such, more generally, the figure of the ‘mad scientist’ had begun to replace that of the ‘mad politician’ and dominant cultural trope of the west). Moreover, the authoritarianism of theoretical science – especially the way that it closes down all opposition to a liberal mono-culture – still needs to be contested; and in the last analysis the failure of the post-modern critique does not invalidate the problems that it addressed. However, its failure does show that the authority of science cannot be contested from weak positions (especially from those positions taken up by scholars working within the Humanities). As an authority it can only be contested from alternative positions of *authority*. Even then, its power is now of such a magnitude that science critics will need to concede that the authority of theoretical science is likely to prove a permanent feature of western cultural life. The real task facing the contemporary science critic, however, is to find ways of limiting this mode of authority that allow for the deeper and more significant questions of human life – especially those associated with ethics, aesthetics and the metaphysical – to reclaim their former significance. This will require a political project that attempts to mobilise philosophical and theological conceptions of the good in order to mitigate against the social, cultural and ecological irrationalities associated with the techno-scientific forms of authoritarianism. Only the authority of *the good*, an authority that must be reconstructed, will be able to reshape the conceptual *a priori* of contemporary modernity in ways that undermine the default scientism of the era. Traditional critiques of science, that view it as the supreme example of the expansion of a false logic of mastery, will no longer suffice: for theoretical science is no longer a method or practice but, in an important ways, a world that we now *inhabit*. The current economic and political crisis is only likely to exacerbate scientific authoritarianism and engender strategies that aim to bring about the marginalisation of those who oppose scientific authority and the further colonisation of the conceptuality of the life world. In this context, the only way in which we can make the modern world fully liveable – and fully rational – is by the mobilisation of alternative sources of intellectual authority; although the precise nature of what such authorities might look like is still very much an open question and perhaps the key political-philosophical issue for the 21st century. In response to the new scientific authoritarianism, what needs to be done, intellectually, is to separate questions of the nature of authority from older concerns about the pathologies of authoritarianism – and thus to show that authority, when it speaks for the good, can be a force for good and the basis for another modernity, one that incorporates science but does not obey it uncritically as a general form of authority. This will require a form of social critique that moves beyond that offered by both

the Frankfurt School and its Wittgensteinian postmodern offspring – one that will have to draw on both classically philosophical and orthodox theological sources. It will need to explore the new relationship between ‘neo-liberal’ capitalism – a form of capitalism very different from the monopoly capitalism of the Frankfurt School – and the scientific authoritarianism. Only from these beginnings will philosophical thought be able to set limits to scientific reason, in a reversal of the new way that Kant set limits to substantive reason at the beginning of the Enlightenment.

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