Forensic rhetoric: COVID-19, the forum and the boundaries of healthcare evidence

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ABSTRACT

The COVID-19 pandemic has brought into sharp focus the shifting role of healthcare evidence in public health presentations. This article investigates the rhetoric of those presentations as a phenomenon indicating both the commitment to evidence-based public health messaging and its political loading in three interlinked case studies: computer-generated imagery ; 'podium' presentation and the NSO Fleming leak of COVID-19 contact tracing data. The pandemic has seen healthcare evidence attain ever-greater visibility in public forums, and those forums have themselves undergone rapid transformation. 'Podium' presentations such as press conferences have featured colourful imagery, and the manifold visualisations of SARS-CoV-2 which have accompanied television broadcasts and web pages display an insistent internal rhetoric. I analyse both forms of rhetoric for what they say about the 'forensic' moment created by COVID-19, and evaluate each in relation to Weizman's conception of the forum, which enables both 'frontstage' corporate and governmental image-building and public scrutiny. This paper evaluates the politics of the presentational strategies which have arisen around COVID-19 and the ethical potential of the forum.

The COVID-19 pandemic has brought into sharp focus the role of healthcare evidence in public health presentations: healthcare evidence has attained ever-greater visibility in public forums, and those forums have themselves undergone rapid transformation. In particular, the virulence and unique character of COVID-19 have driven a plethora of visualisations of the virus, as well as infographics, artistic and photographic projects and 'podium' presentations such as press conferences in which a range of presentational strategies have been enrolled in attempts to foster confidence in government messaging. This article investigates the insistent rhetoric of such presentations as a phenomenon with significant consequences for the Medical Humanities, highlighting the uneasy relationship of the advertised commitment to evidence-based public health with its ideological uses.

The rhetoric of COVID-19 public health presentations, I argue, is bound up with the complex relationship between public trust and public health discourses in what has been called the 'post-truth' era, an era characterised by 'anything goes' relativism and scepticism towards expertise (Weizman 2019). If the idea of post-truth was well established by 2020, it took new forms during the pandemic, including heightened mistrust of healthcare experts, scepticism towards public health institutions and their messaging and the 'infodemic' of fake news deplored by WHO Director-General Tedros Adhanom Ghebreyesus in February 2020, and which he described as spreading 'faster and more easily than this virus' ('Munich Security Conference' 2020). It was against this backdrop, as Amy Hazelton argues, that then US president Donald Trump advocated bleach injections as a COVID-19 treatment and that stories circulated of a woman drinking bat soup as the origin of the virus (Hazelton 2020, 93).[1]

Such a situation is in part the product of changes in media. The WHO report published in 2022 on the historical roots of the COVID-19 infodemic considers the role of information technologies and the mass media in spreading information and misinformation during the HIV/AIDS pandemic in the 1980s and the SARS outbreak in 2003 (Tomes and Parry 2022, 17–22). Beyond the 'new level of connectivity' (p. 1) attained by 2020, according to the report's authors, however, there is in fact a dense intertwining of current affairs content with social media, and the purchase of governments and public health bodies on this shifting territory is increasingly uncertain. In the pandemic era, for Aaron James Goldman, 'established political, scientific, media, and healthcare institutions have not adapted their persuasive techniques to societal shifts in how people access, learn, and appropriate information' (Goldman 2022, 130). It is here, for Goldman, that the breakdown in public trust in 'established institutions' in the COVID-19 era is located. What, though, of these 'persuasive techniques', and their visual traces? While there has been some discussion of the discursive framing of the pandemic and the representations to which it has given rise, more needs to be done to understand the rhetorical strategies by means of which politicians, scientific advisers and healthcare experts have addressed COVID-19, and their relation to the broader cultural investment in attempts to visualise the virus.[2]

In what follows, I analyse discursive formations such as these in relation to the idea of the *forum,* a multidimensional discursive space spanning 'direct' forms of address such as press conferences and other visual forms arising from pandemic public health messaging. I consider three case studies: 'direct' address forums; SARS-COV-2 visualisations and corporate and investigative online forums. I refer in particular to the work of Eyal Weizman, in which the Roman forum, originally 'a multidimensional space of politics, law, and economy […] gradually came to refer exclusively to the court of law, and forensics to the use of medicine and science

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within it' (Weizman 2014, 9). The forum, Weizman argues, provides the etymological root for 'forensic' and constitutes a guiding concept in the wide-ranging Forensic Architecture (FA) project, which seeks to bring to bear critical investigative methods on state violence, armed conflict and climate change.[3] Although FA itself makes relatively little reference to healthcare contexts, it is valuable in elaborating a methodology which can be used to address COVID-19 communications and their wider significance in the Medical Humanities. Just as Weizman situates the 1985 press conferences which followed the identification of Josef Mengele's skull in Brazil as a watershed for forensic epistemologies, in particular the advent of a 'forensic aesthetic', so, I suggest, the pandemic has brought about critical changes in the forums of contemporary public health discourse.

FA engages directly with COVID-19 communications in one important case: the leak of COVID-19 contact tracing data collected in the creation of the NSO Fleming app. This example, analysed in the final section of this article, is key to understanding the forum's online aspect, as the venue for fraught rhetorical exchanges between governments and agencies, NGOs, private companies, journalists and citizen groups. Contact tracing has constituted a focal point for objections to COVID-19 public health measures, characterised by philosopher Giorgio Agamben as a form of 'despotism' (Agamben 2021, 42) which 'exceeds by far any form of control exercised under totalitarian regimes such as Fascism or Nazism' (Agamben 2021, 43). The online forum, in the FA investigation into Fleming, meanwhile, promises to open up discursive formations which complement and challenge the forum in its most legal and literal aspect and to signal collaborative forms of knowledge exchange arising from forensic investigative practice.

COVID-19 AND VISUALISATION

The COVID-19 pandemic has seen extraordinary levels of image production: the articulation of public health messages by governments and public bodies has been accompanied by image-making in novel ways and on an extraordinary scale. It is in this context that Monika Pietrzak-Franger writes of the dramatic shift in UK media reporting of COVID-19 in mid-February 2020, as the 'sparse, mainly verbal reports that speckled the "pages" of the British press transformed into a visual deluge—a visiodemic' (Pietrzak-Franger 2021, 183). The *visiodemic,* in both its excessive proliferation and its complex rhetoric, is undoubtedly one of the key figures of COVID-19. As Pietrzak-Franger argues, the early phases of the pandemic saw 'an overproduction of visual information that spreads rapidly and therefore is difficult to assess critically' (Pietrzak-Franger 2021, 184).

The visiodemic has supported a variety of narratives, including the seemingly inexorable evolution of the disease and, we might add, its 'indiscriminate' (Patel et al. 2020) transmission through the population, and spreads from the mainstream media to government communications and medico-scientific discourse (see also Ostherr). All, I suggest, are subtended by the 'complex argumentative and rhetorical work' (Pietrzak-Franger 2021, 183) of images, which poses particular interpretative difficulties in the case of COVID-19. For Julia Sonnevend, meanwhile, the troubled visual economy of COVID-19 turns on two defining absences: first, that of 'the central sites of the crisis' (Sonnevend 2020, 451) such as intensive care units, nursing homes, meat packing plants and prisons which, with tightly controlled access protocols, are rarely seen, and second that of the virus itself.[4] I return below to Sonnevend's analysis of photographs of the 'stage', or the iconic spaces of the pandemic, in the context of the literal creation of a stage in 'direct address' messaging by the UK government. First of all, though, I consider the absent visual referent which paradoxically drove an extraordinary wave of visual production in the pandemic: that of the SARS-CoV-2 virus itself.

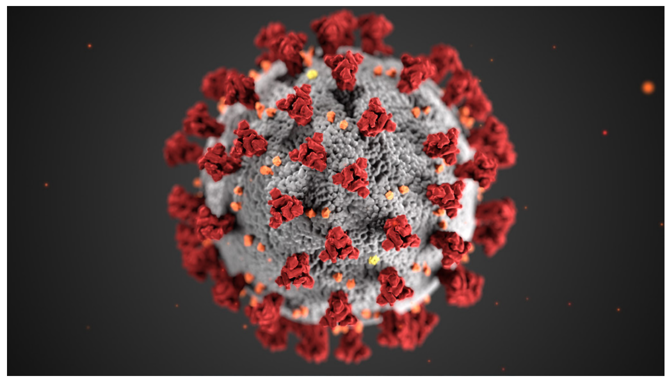

Figure 1 SARS-CoV-2. Adapted from Eckert and Higgins (2020). This image is in the public domain and thus free of any copyright restrictions.

SARS-CoV-2 is invisible to the naked eye. The 'spiky blob' visualisation of the virus was produced in late January 2020 by medical illustrators Alissa Eckert and Dan Higgins (figure 1) (Eckert and Higgins 2020). Following activation of the Centers for Disease Control and Prevention emergency operations centre on 20 January, Eckert and Higgins were tasked with creating an 'identity' for the virus (Giaimo 2020). The extraordinary visibility of the computer-generated imagery (CGI) they created, and the 'iconic' status it subsequently attained, suggest a level of success beyond what could initially have been imagined (Candela 2021, 144). Eckert's aim, as she recounts in a 2020 interview, was to 'persuade viewers that the coronavirus "actually exists"' (Candela 2021, 142), and we see pedagogical messages articulated through design choices such as coloured highlighting of the spike proteins which bind to targeted cells (Britt 2020). As Emily Candela notes, 'pictured as if through a microscope, the illustration may evoke the notion of a "raw" scientific image' (Candela 2021, 141). In fact, though, it is computer visualisation which allows the virus' crown-like spikes and lipid membrane, crucial in understanding its deadly operation, to be clearly seen. The colouring of components such as membrane and envelope proteins is conventional rather than 'real', and the pronounced shadow effects, too, are the result of choices in programming. This, as Eckert says, is very much a 'beauty shot', a phrase whose conventional designation of 'a detailed, solo close-up' (Giaimo 2020) in illustration expands here to encompass a range of aesthetically oriented tactics.

This is an image which became near-omnipresent as the pandemic progressed and its domination of the visual field, I suggest, arises in part from its pedagogical function, and in part from a form of aesthetic excess which exceeds that function. The blob draws attention to 'real' features in ways which suggest the unmediated rawness to which Candela refers, but which in fact rely on mediation and manipulation: as Eckert states, the red spikes give the impression of "something that you could actually touch" (Giaimo 2020). Although the image is pictured *as if* through a microscope, it is not a microscope image, and the *effect* of the real which it creates is bound up with mediation and sensory appeal. The apparent tangibility of the virus particle can only be created by a CGI-aided manipulation of form and scale; SARS-CoV-2, by the time it is visually apprehensible, is always already a representation.[5]

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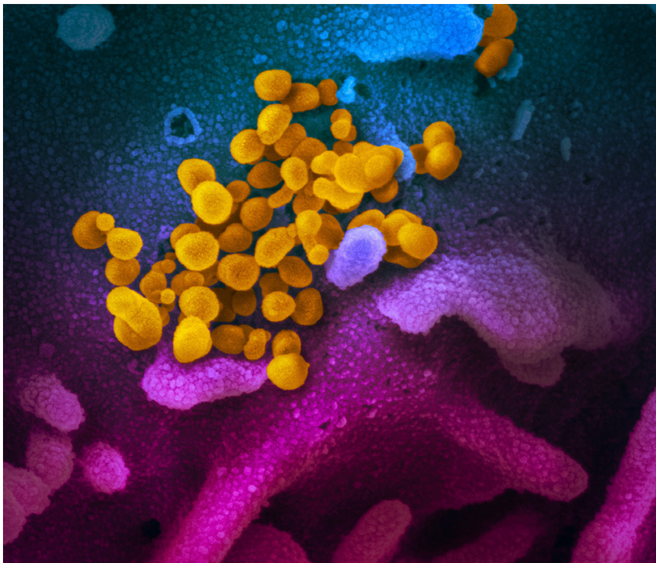

Figure 2 Scanning electron microscope image of SARS-CoV-2. Adapted from NIAID (2020). Licensed under Creative Commons CC BY-ND 2.0. https://www.flickr.com/photos/niaid/49531042877/in/album-72157712914621487/

Nevertheless, microscope images of COVID-19 do exist and, as Victoria Hattam notes, the Flickr images made available by the National Institute of Allergy and Infectious Diseases (NIAID) 'offer a stark contrast with the CDC's "beauty shot"' (Hattam 2021, 13). The NIAID images (figure 2) offer an alternative mode of visualisation to the CDC image, although one which has gained relatively little purchase on the public imagination (NIAID 2020). For Hattam, the 'tightly constrained institutional context—namely, the United States Department of Health and Human Services' within which the CDC and NIAID both sit, 'speaks powerfully to the political possibilities inherent in seeing differently' (Hattam 2021, 11). This is a suggestion I retain in what follows for its ambivalent staging of human voice in institutional settings which, as we shall see in the UK context, both promise transparency about the virus and relapse into a rhetoric more complex even than that of COVID-19 visualisation. That staging, as we shall see, involves both those moments at which human speakers literally give voice to discourse and, more broadly, the ways in which speakers occupy discursive positions in a variety of forums.[6]

While the NIAID images are certainly not *un*mediated, and display magnification and colour enhancement in particular, they are at least microscope images derived from actual virus particles, and thus represent a very different form of image making from the CDC visualisation. In viewing, too, they produce markedly different effects, including, for Hattam, a reinstatement of context and a 'malleability' in the round objects and soft boundaries which they display, creating a 'naturalistic aspect' very unlike that of the CGI (Hattam 2021, 13). In Hattam's reading, visual elements 'cluster together, gregarious', in contrast to the decontextualised 'head shot' of the spiky blob, and in this suggest the ambivalent prospect of 'living with' the virus. Hattam's analysis of the reintroduction of context is persuasive, as the monocular construction of the CDC image gives way to rich, complex arrays of shapes and bodies. What is more difficult to pin down, though, is the object of the images' allusiveness, that is, their capacity to signify other things, as 'slide after slide conjures up hills and valleys, fruit trees, plants and flowers, eggs in a nest'.

If this aspect, for Hattam, 'domesticates and familiarises', this, I suggest, is to downplay the microscope images' deep unfamiliarity (Hattam 2021, 13). In removing context entirely, the CDC image acquires a dense literalism, representing its most important components in visual shorthand and refusing to signify anything but itself. The NIAID images, by contrast, open out onto an alien landscape, a radical otherness. As a consequence, they show the virus' components less clearly, and they are less readily apprehensible, less 'aesthetically pleasing' than the CGI which, for Sonnevend, has something of the visual appeal of a bouquet of red roses and is attached to a dizzying range of COVID-19-related press stories (Sonnevend 2020, 454). Worse still, now that the COVID-19 imaginary is so firmly established, the NIAID images do not 'look like' COVID-19: the microscope images do not correspond to our mental image of the virus. In contrast to the stark lines of the CDC image, they look grainy, slippery and imprecise, threatening contagion rather than promising eradicability. In the era of the spiky blob, these images signify COVID-19 inadequately or not at all; their impact is limited to expert audiences and has little penetration in public discourse.

The prospect of 'sitting with' or living with the virus in Hattam's conclusion promises a subtler understanding of COVID-19, one in which 'attention to interspecies politics opens up political possibilities that presumptive notions of human agency foreclose' (Hattam 2021, 13). Although she does not develop the point, Hattam seeks to move beyond 'tracking the virus […] obsessively identifying its origins', and implicitly critiques what Kirsten Ostherr has called the 'narrative logic of causality in COVID-19 that reinforces racist and xenophobic discourses of containment and control' (Ostherr 2020, 708). That logic, as numerous scholars have observed, frequently tracks back to Chinese wet markets as the origin of the virus and is characterised by 'racist imagery of primitive settings and primordial threats' (Ostherr 2020, 710).[7] Such a narrative, as we shall see, proves to contaminate official government messaging too. It is to the presentation of public health messages in UK government discourse, and the particular entanglement of that discourse with the notion of the forum, that I now turn.

PRESENTING THE EVIDENCE

The UK government press conferences on COVID-19 which began on 16 March 2020 were imbued with a strong sense of visual spectacle. Known as Daily Coronavirus Briefings, they generally consisted of the Prime Minister or the Secretary of State for Health and Social Care, flanked by two public health experts or government science advisors, each speaking from a lectern and addressing both television viewers and journalists (figure 3) (Anon 2020). Journalists were principally connected via videolink, with a small but increasing number present in the conference room later in the pandemic. Events such as these, like the images discussed above, respond to the deep-seated need to make the virus visually present, despite, or indeed because of its highly contingent visibility. In this, they are a literal visualisation of the 'stage', as Sonnevend describes the iconic spaces of COVID-19, positioning the speakers at lecterns as they address the room. While press conferences are well known as a 'distinctly formalised frontstage activity' in which 'the politicians literally come forward on a stage arranged for a particular public' (Ekström and Eriksson 2018, 345), their visual and linguistic rhetoric takes on particular significance in the context of COVID-19, and I return below to their debt to the notion of the forum in recent theories of the forensic. Like the visualisations of

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Figure 3 Prime Minister's statement on COVID-19: 16 December 2020. Contains public sector information licensed under the Open Government Licence V.3.0 (https://commons.wikimedia.org/wiki/File:Hands,_Face,_Space_(Johnson_press_conference).png)

the COVID-19 virus, government coronavirus briefings promise to provide reliable and transparent public health information. They are thus part of the essential effort to control narratives 'regarding [COVID-19's] scientific and clinical attributes and pandemic containment efforts', as Laurie Garrett argues in 2020 (Garrett 2020, 943), and to ground health messaging in fact despite the onslaught of misinformation concerning both the virus and the vaccine.

Nevertheless, the briefings in fact display a complex rhetoric with ambivalent implications for public knowledge, consensus and agency. That rhetoric took markedly different forms across cultural contexts, from the sober presentation of the situation in the Dutch or Finnish government briefings, the latter distinguished by a frank emphasis on the unknowns in the early days of the pandemic (see Parviainen, Koski, and Torkkola 2021, 238) to the rambling addresses of President Trump in America. The muted presentation of the Finnish press conferences contrasted sharply with the grand 'direct address' mode favoured by French president Emmanuel Macron. Macron's 'Adresse aux Français du Président de la République' of 16 March 2020 was filmed at the Elysée palace, and saw presidential authority encoded in both visual and linguistic devices. An establishing shot showing the inner courtyard of the presidential palace at night gave way to a tight, frontally presented sequence in which Macron addressed viewers 'directly' while seated at a desk, the background showing gilt-edged panelling and the European Union (EU) and French flags framing the view to the viewer's left.[8] The address shows a dense theatrical coding, mobilising the fabric and material objects of the Elysée in order to convey a solid and unwavering presidential authority.

As these pandemic 'stages' multiplied across the world, government messaging was frequently characterised by a high degree of visual and linguistic mediation. The UK context, though, represents a particularly provocative case study in terms of the inter-relationship between broad presentational strategies and the specific issues arising from then prime minister Boris Johnson's personal rhetoric. Johnson's utterances were often in tension with official advice, and proved to be grounded in an unstable xenophobic imaginary, and the conduct of briefings was sometimes chaotic. UK government ministers frequently muted or cut off journalists' questions during press conferences, accused journalists of 'making up falsehoods' and controversy surrounded the dropping of England's chief nurse, Ruth May, from the press conferences for failing to express support for special advisor Dominic Cummings (Wardman 2020, 1114).[9] Karen B Sanders' November 2020 assessment of government communication against High Reliability Organisation principles is critical (Sanders 2020), and UK government communications during the pandemic have aroused outright condemnation in some quarters, including a short piece in the *BMJ* in October 2020 entitled "How Not to do COVID-19 Comms—Copy Our Government" (Oliver 2020).

The press conferences respond to the difficulty of visualising COVID-19 both in the 'frontstage' presentation of human speakers and in their manipulation of textual and visual material. As they evolved, the press conferences saw increased use of slogans and icons on the lecterns, including the 'hands, face, space' slogan accompanied by simple visual motifs, and, most importantly, the ever-greater prominence of data visualisations. The general framing of the COVID-19 situation by the prime minister or Health Secretary was followed by a more technical briefing by one of the scientific advisers or public health experts, usually including a PowerPoint presentation and often featuring infographics. Later comments by both politicians and experts then attempted to translate the detail of the data back into practical advice. Jonathan Van Tam (Deputy Chief Medical Officer from October 2017 to March 2022) was often praised for a gift for plain language and pithy analogies, including his description of COVID-19 as 'a goalkeeper that can be beaten' (Blackall 2022).[10]

Then prime minister Boris Johnson's contributions, meanwhile, proved rather more loaded. A famous early example came in an attempt to explain the consequences for National Health Service (NHS) hospital capacity of COVID-19 infections. An infographic showing two COVID-19 scenarios in the form of a graph attained enormous currency from February to March 2020, one, in which no preventative action was taken against COVID-19, and a second in which preventative measures were employed. The graphic, and the phrase 'flattening the curve', which became closely associated with it, ultimately date back to a CDC paper on pandemic planning from 2007 (Centers for Disease Control and Prevention (US) 2007); a version showing the current COVID-19 situation and its relation to NHS hospital capacity was presented by Professor Steven Riley to SAGE (SPI-M) on 16 March 2020. The idea of 'flattening the curve' soon spread to press conferences and to public discourse on preventative measures such as hand hygiene, social distancing and, ultimately, lockdown (Riley 2020).

Johnson, meanwhile, glossed the research in more colourful terms, as 'squashing the sombrero'. As Jonathan Charteris-Black notes, in 'flattening the curve', only the verb 'flatten' is figurative. Johnson's expression, meanwhile, is entirely metaphorical, and embodies a 'drift from the literal towards metaphoric' language (Charteris-Black 2021, 141). Charteris-Black goes on to analyse other Johnsonisms, including the announcement of the aim to 'flatten the second hump' in a press conference in September 2020, when a second wave of infections threatened: "So if we can grip it now, stop the surge, arrest the spike, stop the second hump of the dromedary, flatten the second hump" (Tapsfield 2020). The expression is followed by a rhetorical self-interruption, as Johnson reflects, "dromedary or camel? I can't remember if it is a dromedary or a camel that has two humps? Umm. Please check". As Charteris-Black observes, the flurry of

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metaphors 'is amusing and was in keeping with the jocular, optimistic tone preferred by Johnson' (pp. 141–42).[11] The barrage of exotic references within a chaotic debating society-style performance serves to distract from the serious content of the briefing and, as Edward Docx has argued, the appeal to comic elements is a consistent feature of Johnson's speeches, 'appealing to our innate understanding of the absurd'. Johnson's incarnation of the figure of the clown serves to 'relieve the endless tension and trauma of reality' (Docx 2021).[12]

Such a rhetorical performance has more serious implications, however. In 'squashing the sombrero' and 'flattening the second hump', Johnson offers a verbal gloss on a visualisation, and the underlying logic of that gloss is one of misdirection. In fact, both expressions bear all the hallmarks of a personal rhetoric established during Johnson's time at *The Times, The Daily Telegraph* and *The Spectator* long before he became prime minister, work which Peter Oborne characterises as 'gonzo journalism' (Oborne 2021, 61). There is considerable continuity here between Johnson's colourful comments on the EU, for example, which Charteris-Black sees as the work of an 'inveterate metaphor addict', and the language Johnson later used to talk about COVID-19 (Charteris-Black 2019, 168). Beyond any practical purpose, the phrases open out onto a highly charged semantic field in which the Other, like a virus, must be combatted and neutralised. The sombrero and the camel belong to the same xenophobic imaginary as the 'crowds of flag-waving piccaninnies' and tribal warriors with 'watermelon smiles', described by Johnson in a 2002 *Telegraph* article (Johnson 2002). The possibility arises here that the racial or ethnic Other plays a disruptive, threatening role in the visual and linguistic imaginary underpinning UK government health policies, a way of imagining the world which is rooted in a tissue of visual and linguistic constructions. This is a world in which people from other countries wear funny hats; reducing the incidence of the virus is equated with obliterating the signs of otherness, recalling once more the quest for the story of COVID-19's origins, locating the virus in a remote elsewhere.

The aims of Johnson's rhetoric, then, are fundamentally different from those of Van Tam's: where the deputy medical officer introduces a limited field of metaphor with clear, direct applicability to the COVID-19 situation, Johnson's glosses are distracting and implosive. Instead of adding to our practical understanding of COVID-19, they offer a self-regarding rhetorical spectacle. In this, they are diametrically opposed to the call for 'honest' language in Charteris-Black's *Metaphors of Coronavirus* and for 'a judicious use of metaphors' in the work of Brigitte Nerlich (Nerlich n.d). For Charteris-Black, 'honesty can aid species survival' because leaders who use language 'honestly', including metaphors which correspond closely to embodied experience, foster greater compliance with public health messaging (p. 289). As Nerlich argues, 'metaphors and science should not be used to distract from failures of political will'.[13] There is a yawning gap between such ideals and verbal performances like those we have discussed here, with their self-serving rhetoric and obfuscation, which fatally distract us from the domain of fact.

We have come a long way, in this section, from the classic view of formal government press conferences as 'conventionalised communicative events' (Bhatia 2006, 175) through which governments pursue ideological positioning, public messaging and 'political persuasion' (Bhatia 2006, 174), and towards a complex, chaotic presentational mode in which backstage elements constantly interrupt the 'frontstage' and advertised subjects are decentred through rhetorical strategies. All of this begs further questions of the forum: of the space, both literal and figurative, of COVID-19 presentations. The UK government press conferences I have discussed grapple with problems of evidence, address and agency in unique ways; they are nonetheless grounded in an understanding of the forum in forensic theory which brings to bear important insights on the relation of speaker, voice and object, and whose consequences for current thinking on COVID-19 communications are highly significant.

THE VIRUS AND THE FORUM

COVID-19, as we have seen, inhabits a borderline discursive position. It is difficult to talk about and difficult to imagine: we can't see the virus, but it is not quite invisible; it is not capable of living independently and yet it has some characteristics of biological life (Brown and Bhella 2016; Kaplan, Wan, and Achenbach 2020). The government press conference becomes a privileged and critically important forum for talking about COVID-19, and one whose business it is to make COVID-19 discursively present, but these very aims force it to grapple with the intractable marginality of the virus. As a result, the press conference strives to signify COVID-19 through visualisations, formal presentational strategies centring on human speakers and individual rhetoric. Many people watched the UK briefings via a further layer of mediation in the form of the daily *BBC News Special* programme dedicated to COVID-19 in 2020–21, and which included its own infographics, frequently accompanied by background animations featuring motifs similar to the spiky blob CGI. The press conference thus takes on a self-conscious, hypermediated form in this context, marked by ever more strenuous efforts to fill the absence (or rather near-absence) signalled by COVID-19.

I return, therefore, to Weizman's conception of the forum in order to tease out the specific implications of forensic rhetoric for COVID-19, and for the Medical Humanities as it has been shaped by the pandemic. One of the fullest analyses of the forum in Weizman's work is that in *Mengele's Skull* (2012), coauthored with Thomas Keenan, and which posits the discovery, identification and public presentation of Mengele's skull in Brazil in 1985 as a watershed moment in the forensic turn. If, as Weizman argues, quoting Annette Wieviorka, the Eichmann trial heralded the 'advent of the witness', the Mengele case constituted 'a parallel emergence of the "thing"' (Keenan and Weizman 2012, 13). Although it continues to be bound up with the statements of human witnesses, the case announces a new investment in material evidence. The story was a sensation and the media hubbub led to a series of presentations by forensic experts, including a press conference held at the Medico-Legal Institute labs in São Paulo in June 1985 during which the Brazilian forensic specialist Daniel Romero Muñoz displayed the skull and addressed journalists. As Keenan and Weizman document, such presentations may be seen as rhetorical: the various public presentations of the remains (typically the skull, frequently presented to the public view via the hands of the 'expert') serve to unite the 'object and its interpreter' as a 'single interlinked rhetorical unit' (p. 29). The mute presence of the skull plays a crucial role in authenticating the speech of the expert, whose discourse is silently corroborated by the prop which the skull has become.

There are clear parallels here with the COVID-19 press conferences, which trace out a perpetual search for the appropriate object to support the testimony of the medical expert. Infographics and PowerPoint slides play this role, but their failure to attain the solidity of material evidence in the traditional sense inscribes the press conference with a rhetorical

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deficit. The endless accumulation of evidence may be traced back to this founding absence, as multimedia presentations serve up infographics and visualisations which are then corroborated in the speech of the expert witness, glossed in the speech of the politician and refracted through the lens of the news media, where they acquire further graphical accompaniments and narrative commentary. In this context, online forums, in which such media can be endlessly hyperlinked and recombined, become increasingly prominent, as we shall see. Johnson's personal rhetoric, too, can be seen as a response to this situation: instead of the thing itself (material evidence of the virus), COVID-19 is endlessly commuted, in figurative language, into sombreros, camels and even the image of the 'British rail sandwich' which, like the graph representing two waves of COVID-19 infection in March 2021, curls at both ends (Woodcock 2021). These are all things which resemble the COVID-19 situation under discussion, but increasingly tenuously; above all they point to rhetorical excess.

What is striking here is the accumulation of rhetorical components; if we can still imagine a single rhetorical unit, as in Keenan and Weizman's vision of the Mengele press conference, it is a heavily freighted one. The COVID-19 press briefing replicates and amplifies both the multi-agential articulation of the Mengele event (in the combined discourse of the expert and the object) and its intermediality (in the imaging apparatus by which the skull was identified). Each of these elements is reproduced according to the principle of excess which, as we have seen, characterises COVID-19 image production. The *visiodemic,* then, is inscribed within the rhetorical structure of the forum in the age of COVID-19, as the 'visual deluge', or 'overproduction of images' in response to COVID-19's contingent visibility morphs into a proliferation of speakers and (re)mediations (Pietrzak-Franger 2021, 183). Just as Keenan and Weizman single out the Mengele case as a milestone in the evolution of the forum, the COVID-19 pandemic represents another. As Weizman and Keenan note, the Eichmann and Mengele cases did not merely present new forms of evidence; 'they did nothing less than shift the conditions by which that evidence became audible and visible' (Keenan and Weizman 2012, 13). COVID-19, meanwhile, heralds a crisis in the forum in terms of its implications for public confidence in health messaging. Although Eichmann and Mengele led to changes in the way 'juridical facts were constructed and understood' (p. 13), there is no suggestion that they led to a decline in confidence in those facts. In the case of COVID-19, meanwhile, the creaking, overloaded architecture of the forum suggets a breakdown in public trust: the rhetorical presentations of Johnson and other political leaders indicate a crisis in the forum and, ultimately, a changed standpoint to the 'truth'.

INVESTIGATIVE AESTHETICS AND THE ONLINE FORUM

I turn in the final part of this paper to a case with dramatic implications for faith in public health messaging and for the forum: that of the NSO Fleming leak of COVID-19 contact tracing data. Contact tracing represents a key site for the encounter of public trust and health communications, requiring users to record and transmit location data in order to identify past contacts of infected individuals and thus to limit the transmission of the virus. As Yoshua Bengio and colleagues note in 2020, digital contact tracing allows behaviour to be adapted quickly, with the 'potential to establish rapid epidemiological control of the pandemic' (Bengio et al. 2020, e342). As the authors also observe, however, 'most of the applications in use or under consideration have an impact on individual privacy that democratic societies would normally consider to be unacceptably high' (Bengio et al. 2020, e342). Such concerns indeed come to the fore in relation to COVID-19, both in the objections to 'technological-sanitationist despotism' of COVID-19 negationists such as Giorgio Agamben and subsequently in evidence of actual breaches of privacy (Agamben 2021, 10).[14] I consider the fall-out from the NSO Fleming breach here in relation to two online forums with distinctive presentational (rhetorical) forms: that of the NSO Group and that of the FA project, which investigated Fleming in 2020.

If public trust in digital technologies was limited by June 2020, as Bengio et al note, the NSO Fleming app had already betrayed the anonymity of its users. Fleming, a contact-tracing programme, was launched by Israeli company NSO in March 2020 as COVID-19 spread. In May that year, an unsecured database relating to the programme and featuring location data from more than 30 000 users' mobile phones was found online. Part of the dataset was sent to FA who, in consultation with cybersecurity experts Gary Miller and John Scott-Railton, concluded that the sample was 'closely consistent with real mobile phone data' and that NSO Group had 'violated the privacy of more than 30 000 unsuspecting individuals' (Forensic Architecture 2020). Information on Fleming is sparse on the NSO website, where it is limited to a terse undated three-line announcement of its development, along with an acknowledgement that 'experts say location tracking can present serious privacy concerns' (NSO Group 2021).

Much more space is devoted there to NSO's 'ever-evolving efforts to assure that its products are used only as they were always intended—to save lives through the prevention of serious crime and acts of terror, as well as through search-and-rescue, data analytics, anti-drone technologies, and other closely related missions and applications' (NSO Group 2021). The statement is presented as a news item on the NSO website, published on the occasion of the company's first 'Transparency and Responsibility Report' in June 2021, and no reference is made to public health applications. The report is a careful rhetorical performance, combining the language of corporate responsibility with striking graphics and a sober font. Such public relations manoeuvres are occasioned by the Fleming breach, and by earlier revelations in *The Guardian* in 2019 and 2020 concerning the Pegasus spyware sold by NSO to 'vetted government customers' and another data leak containing more than 50 000 phone numbers. Despite energetic NSO assertions of 'deep due diligence processes on prospective Pegasus licensees' (NSO Group 2021), the investigation by non-profit media organisation Forbidden Stories and Amnesty International, later in partnership with *The Guardian,* led to a strong suspicion that those licensees were breaching their contracts and spying on prodemocracy activists and journalists investigating corruption. One such case, although unverified, is that of Mexican freelance journalist Cecilio Pineda Birto, murdered in 2017 and subsequently found on the leaked NSO list (Kirchgaessner et al. 2021).

Much of the remedial work through which NSO attempts to legitimise its operations takes place through the officialese of the Transparency report, and it comprises two distinctive forms of image-making. The first, on the website landing page, announces 'cyber intelligence for global security and stability' next to a CGI animation of a rapidly turning globe studded with twinkling points of light in a variety of colours. Lower down, stark text passages on 'global threats' scroll into view and a burning car emitting plumes of black smoke is shown next to a warning that 'terrorists and criminals have gone dark'. Threats like these, it is

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implied, can only be tackled by 'intelligence experts […] dedicated to keeping pace with the ever-changing cyber world' (NSO Group 2021). The NSO website constitutes a highly organised and rhetorical forum in which seemingly benevolent aims are rooted in solid ethical principles and supported by references to 'government intelligence and law enforcement agencies' and quotations from the Five Eyes intelligence alliance. Presentation is slick, and the tone is one of measured, rational authority in the face of rapidly evolving external threats.

Such rhetoric is compounded in the 'Governance' section of the site, which complements the staging of 'global threat' with a visual performance of expert knowledge. The careful textual detail on the 'Governance, Risk and Compliance Committee' presented here is accompanied by two stock images: the first shows a staged scene in which a man in an open-necked shirt and dark jacket is explaining a document to a woman, who is busy writing in a notebook. Both are bathed in bright light from a nearby window; the desk is strewn with papers and the man's arm rests on a thick reference tome. Most tellingly of all, a gavel, representing courtroom justice, sits on the desk just next to the man's mobile phone as he talks and points to a piece of paper printed with text and infographics. The faces of both individuals are obscured or out of frame, as is the text, thus guaranteeing anonymity in sharp contrast to the betrayal of privacy in the Pegasus and Fleming projects. The gavel, meanwhile, is reproduced in iconic form in the large image at the top of the page, in which a set of scales (once more representing justice) is glimpsed out of focus in the background. The mode of presentation shifts here from the narrative statements of the landing page and towards a set of visual symbols (the gavel) which can have no contextual purpose in the scenes in which they feature, but which encapsulate all the key characteristics of the forum in iconic form. The mission of NSO, we infer, is to bring the light of reason and justice to a world beset by the darkness of criminality. That mission is universal (hence the twinkling globe), transcending context, and its execution is rooted in unique expertise.

The FA investigation into Fleming, meanwhile, was published on the project website in December 2020 and covered in a *Techcrunch* article by Zach Whittaker later that month (Whittaker 2020). FA investigates the NSO claim that 'the Fleming demo is not based on real and genuine data. [….] The demo is rather an illustration of public obfuscated data. It does not contain any personal identifying information of any sort' (Whittaker 2020, quoted in Forensic Architecture 2020). While 'obfuscatory data' refer to real data which have been changed to prevent the identification of individuals, FA concludes that the temporal and spatial patterns indicated by the dataset they obtained are 'closely consistent with real mobile phone data' and that simulation of such a number of data points would in practice be very difficult. In the face of the FA scrutiny, NSO is lured into a rhetorical error, claiming both that the demo does not contain 'real' data *and* that the data are obfuscated. This, then, is a denial which does not even maintain internal consistency. The documentation of the FA investigation takes the form of hyperlinked text interspersed with graphics and a short video. The text follows the model adopted in all of the investigations documented on the site, with section headings presented in a red text box and a table showing details of the investigators, partners, related investigations and press coverage at the foot of the page. The project video combines a montage of news stories, media interviews, social media posts and a demonstration of the 'time map' simulation used by FA to show possible movements of the users whose data featured in the leaked dataset.

It is not only the findings of the investigation that are important here (although they are indeed important); the mode of presentation is highly significant for thinking about the changing nature of the forum and the ways in which evidence is accommodated within it. The multimedia architecture of the FA website fosters a sensation of participation in investigative work in sequences derived from simulations, and the effect is cemented in the shots of computer code scrolling down the screen. The use of human speakers, meanwhile, reinforces the sense of the site as a forum in the forensic sense. The Fleming investigation video has a voiceover, by FA collaborator Sergio Beltran García, which serves to thread together its disparate visual media. We do not see García, but his voice serves as a unifying device, conveying the FA findings and their significance in narrative terms; the FA narrators are always members of the project team and explicitly credited, ensuring that the voiceover bears the hallmarks of epistemological authority. As far as presentation is concerned, this is a very similar move to those seen in the in-person forums we discussed earlier: the expert witness enters the stage in order to explain the evidence to the public, and their voice is key to this performance. The performance has moved to a virtual space (there is at the time of writing no accompanying exhibition on Fleming, unlike many of the other FA investigations), but its dynamics sharply recall those of the Mengele press conference of 1985 and the COVID-19 briefings of 2020–21, with the voice accompanying the presentation of objects.

Here, then, we encounter a striking contemporary instance of the forum in which the human voice takes its place within a complex intermedial ecology. That ecology sees actors such as NSO initiate self-legitimising gestures in the context of an online forum which must be read critically. Such a critical mode provides a blueprint for further investigation of the discourses surrounding socio-medical interventions such as contact tracing, and the Medical Humanities, in the wake of the pandemic, must endorse this form of critique, and build bridges with the forensic measures employed by FA. The FA Fleming investigation, meanwhile, has its own rhetorical make-up: its discoveries are presented via a website whose intermedial dynamics rival those of the NSO site in every respect, with slick and accessible graphics and a multimedia structure which fosters a sense of proximity or participation. In part, of course, this is simply a consequence of the long-established tendency of viewers to make credibility judgements based on websites' aesthetic effects (Robins and Holmes 2008), but the concern with aesthetics ultimately proves to be bound up with the investigative work of FA in a more organic and programmatic way. I turn now to that concern in order to draw some provisional conclusions on the current state of the forum and its standpoint to public health discourses and healthcare evidence.

AESTHETIC OPERATIONS

Many of FA's investigations are presented via exhibitions as well as the project website. The exhibition, often staged in an art venue such as the ICA in London or the Akademie der Künste in Berlin, thus becomes a key forum for dissemination. As Weizman has recently argued, "if you want to work towards political change, you need to put [the work] in other fora". Art and cultural spaces, he says, have been "very good venues in which to get our work beyond the legal bubble" (Basciano 2022). There may be something of a tension between the investigative programme of FA and the work's appearance in locations deeply implicated in the history of art, and I have written elsewhere on the ambiguous status of the exhibition in FA's mission (Jones 2022, 5–6). What

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is beyond doubt, however, is that aesthetic concerns are deeply rooted within that mission and become the focus of *Investigative Aesthetics* (2021) (Fuller and Weizman 2021). The work which features the clearest account of the forum, *Mengele's Skull,* is subtitled *The Advent of a Forensic Aesthetics*, and the decisive moment described there, the identification of the skull, is underpinned by 'aesthetic operations': "decision relies on aesthetic operations, that is, on the way and order by which things and events appear to us" (Keenan and Weizman 2012, 23).

Referencing Lorraine Daston, Keenan and Weizman argue that 'the making of facts […] depends on a delicate aesthetic balance, on new images made possible by new technologies' (p. 24). The new technologies in question concern the imaging process used to identify the remains, where photographs of Mengele are superimposed on video, with pins stuck into clay on the surface of the skull so that the contours of the face and the skull can be measured and compared. The observation has wider applicability, however, and could equally refer to the use of CGI in the visualisation of COVID-19, as we saw earlier. Weizman's key point is that a process of *aesthetic* judgement is inscribed within the medico-forensic operation of imaging such as this. Weizman is at pains to distinguish such aesthetic operations from a Kantian version of aesthetic judgement, rooted in human experiences of beauty, and turns instead to 'sensing' as a capacity proper to 'all manner of material things that elaborate sensitivities to the things they come into contact with' (Fuller and Weizman 2021, 44). In fact, though, I suggest that human aesthetic contemplation threads its way through the work of FA, and is seen, too, in the rich seam of aesthetically inflected visual practice now associated with the broad category of the forensic.

Weizman's theories, and the larger project of FA, speak to the aesthetic excess which we saw colour the construction of the spiky blob and the persistent rhetoric of public health messaging on the virus. What has so far remained largely unexplored, though, is the broader potential of recent work on the forensic for the Medical Humanities. FA charts a changing conception of the forum which is essential to understanding both, as the unstable forums of government briefings on COVID-19 give way to the online forum and investigative work is devolved to a complex architecture of agencies, NGOs and private companies. This, too, is the era of post-truth, of the fragmentation of the forum and of the risk, described by Peter Oborne, that "we are losing that common domain where rival groups can come together peacefully" (Oborne 2021, 165). The loss of common ground, and of consensus, is the backdrop to the self-serving rhetoric of Boris Johnson and to the governmental deceit surrounding it.[15] Weizman's work, once more, offers a potential way forward, and it is striking that its proposals do not include a liquidation of the aesthetic but rather an embracing of its possibilities.

In 'Open Verification', an article published in *e-flux* in 2019, Weizman replaces the 'dark' criminality described by NSO with a still more chilling prospect: that of dark epistemology. Dark epistemology, we learn, is a form of insidious propaganda closely linked to 'post-truth', and which seeks to 'blur perception so that nobody knows what is real anymore' (Weizman 2019). The idea is a clear consequence of Johnson's performances, in which metaphor becomes a distraction from the truth, and a key characteristic of the 'new moral barbarism' seen by Oborne in the premierships of Johnson and Trump. If, as Weizman argues, 'state perpetrators and dark epistemologists want to destroy the possibility of a common ground', it is the method of open verification which provides the most effective resistance:

> In socializing the production and dissemination of evidence, it [open verification] ultimately establishes an unlikely but fundamental commons in which the production [of] facts constitute[s] the foundation of an expanded epistemic community of practice built around a shared perception and understanding of the world.

This, then, is a citizen-focused mode of knowledge exchange involving artists' studios, universities, activist organisations, victim groups and the media, and suggests a decentring of institutions and a move towards open source knowledge. Central to this vision is the notion of the 'aesthetic commons', which allows for the crucial position assigned to photographers and film makers in Weizman's argument and for the role of 'cultural venues' as 'forums complementary, and sometimes even alternative to legal process' (Weizman 2019). This is a radical reimagining of the forum, acknowledging its rhetorical and aesthetic aspect and making of that aspect a site for resistance, a source of new common ground.

This is an arresting proposition, promising a new role for citizens and one which connects with the growing importance of co-production and co-design in contemporary approaches to healthcare. Patients are increasingly cast as 'active contributors to their own health and to healthcare experiences and outcomes' (Robert et al. 2022, 1), and as agents who can help shape the delivery of public services.[16] Government communications on public health, meanwhile, show little trace of such approaches, often remaining top-down and rhetorical in all the ways we have examined above. What is clear, though, is that recent forensic theory and current Medical Humanities approaches have important points of intersection, and that the forms of scrutiny seen in Weizman's work can usefully be extended to the troubled waters of COVID-19 communications. The visiodemic is characterised by both viral profusion and rhetorical excess; tools like Weizman's investigative aesthetics are urgently needed in the battle to understand and critique the discursive operations which have taken place in the name of COVID-19. Such work, in the final analysis, must enlist the ambivalence of the forensic, which refers both to the capturing, monitoring and presentation of evidence and, in work like that of FA, investigative critique which, in turn, produces further evidence and analysis. 'Forensic methods', as Sekula argues, 'have also become tools of opposition' (Sekula 2014, 30). Those tools, too, become sensors for the conditions of visibility of evidence. Rhetoric, the strategies by which visual representations and verbal performances are structured, cannot be excluded, even when such tools are rigorously employed. Its uses, however, can themselves be evaluated in the course of a politically engaged, self-critical practice. In thinking about COVID-19, and the broader landscape of the post-COVID-19 Medical Humanities, that practice represents a key opportunity, and one with the potential to re-energise the notion of the commons within public health discourse.

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NOTES

1. See also Ball and Maxmen (2020).
2. See, for example, Amit Prasad's analysis of the 'discursive employment' of COVID-19, including in the notorious video *Pandemic* (Willis (2020)), featuring former research scientist Judy Mikovits (Prasad 2022).
3. In this context, see in particular Weizman (2017); Keenan and Weizman (2012).
4. The problem with identifying the 'sites' of the pandemic is perhaps a broader one than Sonnevend suggests. If later news reporting did increasingly venture into sites such as those Sonnevend mentions, the question of how to locate and visualise the virus remains intractable, and continues to be shaped by narratives such as those identified by Pietrzak-Franger. Contemporary visualisations continue to be bound up with the larger visual economy, or repertoire of prior visual representations; for an influential use of the term, see Poole (1997).
5. Mediation has accompanied medical images throughout their history; in this context, see the discussion of the myth of transparency in medical imaging in the study by Van Dijck (2005).
6. Such a discussion of voice begs the broader question of the role of voice and narrative in healthcare contexts. Work such as that of Ann Jurecic, for example, aims to 'reclaim patients' voices from the biomedical narratives imposed on them by modern medicine' (Jurecic 2012, 3), while Woods (2011) offers a nuanced reading of the limits of narrative in the medical humanities.
7. In this context, see also Lynteris (2020) and Lynteris' earlier article on Chinese wet markets (Lynteris 2016). On the narratives of blame which arose during the pandemic, see Jaworsky and Qiaoan (2021); on origin narratives, see also Wald (2008, 234–42).
8. The desk appeared not to be the large antique piece from which Macron had addressed French citizens during the *gilets jaunes* protests in 2018 (see Chrisafis 2018), but the semiotics of wealth and ostentation were clearly present once more, despite the universalising appeal to 'mes chers compatriotes' at the opening of the speech.
9. On the Cummings affair and public trust, see also Fancourt, Steptoe, and Wright (2020).
10. On the role of UK government science advisers in public presentations during the pandemic, and the broader issues of the communication of healthcare policy, see Ball (2021, 5). In a later coauthored submission to the UK COVID-19 public inquiry, to which Ball contributed, greater independence for government scientific advisers constitutes a central recommendation (see Michie et al. 2022; Birch 2021). For David King's views on the role of government scientific advisers, drawing on his own experience during the BSE crisis, see King (2020).
11. Johnson's use of language is in sharp contrast to the use of metaphor to enhance gravitas rather than comic effect during the pandemic. The use of war metaphors, in particular, was initiated by Chinese premier Xi Jin Ping in 2020 and followed by Macron, Trump and Johnson, among others (see Panzeri, Di Paola, and Domaneschi 2021; Hanne 2022; Piredda 2022).
12. In drawing out the implications of Johnson's political clowning, Docx refers to the scene in Hamlet in which Hamlet warns the actors 'not to allow the clowns to distract the audience and make them laugh while important issues are being settled'. What was notable in the Johnson administration was precisely the absence of any such restraining authority, leading to an endless profusion of metaphor and comic interventions.
13. On the troubled domain of COVID-19 and metaphor, see also Döring and Nerlich (2022); Nerlich (2022).
14. There is an important distinction to be made here between digital and manual contact tracing and between voluntary and mandatory contact tracing. The latter saw the use of app-based temperature monitoring as a condition for access to public spaces, notably in China and East Asia (see Liang 2020).
15. In this context, see also Frieze (2019). See in particular Frieze's analysis of the equation of truth with verifiability (Frieze 2019, 1).
16. See also Batalden (2018), Brandsen, Verschuere, and Steen (2020).

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