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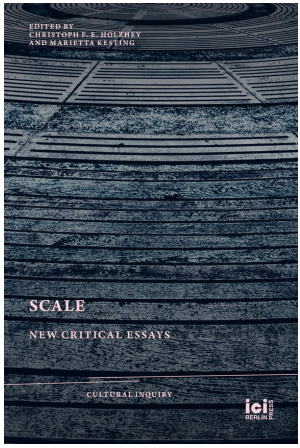

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The Pleasure of the 1:1 Scale

A Short Interview with Lisa Messeri

FILIPPO BOSCO, FEDERICA DI BLASIO, AND MARIETTA KESTING

ICI Berlin invited Lisa Messeri to its 2025–26 lecture series *Scale* to address questions of scale that emerge from the perspective of her fieldwork in the anthropology of science and technology.[1] Her reflections hold great potential for introducing overlooked areas of inquiry in the current theorization of scale. The following short interview aims to continue the conversation on some of those themes, including the situatedness and universalization of knowledge, the limits of 1:1 simulation and surrogates, and the pleasure and affective dimension of scale.

Filippo Bosco, Federica Di Blasio, Marietta Kesting (ICI): Your first book, *Placing Outer Space*,[2] addresses some issues concerning situated knowledge and planetary imagination that have since become central to the debate on scale in recent years.[3] Your analysis centres place as a 'mode of understanding',[4] but also destabilizes assumptions we might

1 Lisa Messeri, '1:1 — Drawn to Scale', lecture, ICI Berlin, 23 March 2026, video recording, mp4, 01:37:39 <https://doi.org/10.25620/e260323>.

2 Lisa Messeri, *Placing Outer Space: An Earthly Ethnography of Other Worlds* (Duke University Press, 2016) <https://doi.org/10.1215/9780822373919>.

3 See, in particular, Joshua DiCaglio, *Scale Theory: A Nondisciplinary Inquiry* (University of Minnesota Press, 2021).

4 Ibid., p. 11.

have about place — for example, the fact that we tend to associate place with the local scale rather than with the 'enormity' of the planetary scale.[5] Does your leaning towards place reflect a mistrust towards scale as an 'objective' cognitive apparatus (echoing Donna Haraway's cautious warning against the god trick), or do you see the relationship between place and scale in a different way?

Lisa Messeri (LM): In *Placing Outer Space*, I took scale and scalar practices for granted. They were not the object of inquiry but rather descriptors of the geography through which my ideas travelled. The phenomena that the scientists of this book studied existed at the planetary scale and I argued that place-making was a strategy they employed to yoke this scale to human experience. As I wrote, 'Place suggests an intimacy that can scale down the cosmos to the level of human experience.'[6] There are of course consequences of wielding place-making in service of scientific knowledge, and I explore one of these when considering how scientists present 3D maps of Mars to the public. Understandably, they were eager to share the excitement of the feeling these representations offer of 'being on' Mars, translating an abstract entity into a relatable kind of place. But Mars is not only something that can be made knowable through acts of being. I therefore found it interesting that this performance of 'situated knowledge' was also a performance of a hegemonic mode of scientific knowing at the planetary scale. That was my reason for naming this practice a double god trick, taking inspiration from Haraway's own god trick exemplar (viewing a planet from above) and showing that, even when the planet is viewed from the surface through a purportedly embodied perspective, it still conveys the universalizing work of the scientific gaze. I was not making a normative claim, nor offering a caution, but instead exploring the work that place-making does when communicating science. I quite like DiCaglio's re-reading of this double god trick, in which he argues that this scalar work risks minimizing 'the enormity of what is being performed' in studying distant planets.[7] Such an analysis becomes

5 Messeri, *Placing Outer Space*, p. 11.
6 Ibid., p. 2.
7 DiCaglio, *Scale Theory*, p. 489.

available when shifting the focus away from place-making and onto scale-making, and so I see these two readings as compatible.

ICI: In your last book, *In the Land of the Unreal*, the concept of the façade is extended from architecture and the specific urban aesthetic of Los Angeles to define a specific feature of virtual reality (VR).[8] Like façades, VR promises 'more' reality while at the same time limiting one to 'less' experience. How do you interpret this unmatching of real and 'unreal' in the 1:1 scale of simulation? Do you foresee the possibility of a scalar understanding of the façade (something that keeps at a distance and yet allows zooming and projective fantasies)? In particular, VR resonates with Anna Tsing's remarks on scalability as 'a triumph of precision design, not just in computers but in business, development, the "conquest" of nature, and, more generally, world making', and as 'allow[ing] us to see only uniform blocks, ready for further expansion.'[9] What, vice versa, would be a nonscalable quality in simulation?

LM: The façade helped me articulate what was both appealing and illusory about a VR experience (and, by extension, other simulations). Imagine Cinderella's castle at Disneyland. It is a beautifully detailed façade, and a child might imagine that there is even more wonder inside. But instead of the interior of a castle, inside there is a restaurant, an exhibit, backstage areas, and empty spaces. The façade promises a rich world, but 'in reality' it conceals something else. This is one of the reasons that simulations are so pleasurable, because we can wonder at the level of detail invested in something that is other than it is. To think of VR as a façade is to appreciate that it, too, promises more than it can actually deliver. A wonderful VR experience might seem infinitely explorable, but there are limits and edges to the virtual. This is what makes VR unreal — not that it is in opposition to reality, but rather the definition of the unreal that I offer in the book names an awareness of the multiplicity of reality. The 'unreal' is then also a scalar

8 Lisa Messeri, *In the Land of the Unreal: Virtual and Other Realities in Los Angeles* (Duke University Press, 2024) <https://doi.org/10.1215/9781478059226>.

9 Anna Lowenhaupt Tsing, 'On Nonscalability: The Living World Is Not Amenable to Precision-Nested Scales', *Common Knowledge*, 18.3 (2012), pp. 505–24 (p. 505) <https://doi.org/10.1215/0961754X-1630424>.

term, in that it is meant to apply to technologies and techniques like VR, the city of Los Angeles (as the setting of my ethnography), and also elements of contemporary politics. In the US context, for example, I would label climate change denial as unreal not (only) because it is wrong, but because it exposes that scientific reality is but one reality that structures people's lifeworlds. To bring it back to VR, if you were doing a virtual experience of Cinderella's castle, you would not forget that you were still in your living room even if you might wonder at how realistic the simulation feels. It can be pleasurable to feel immersed in one reality (whether it is a virtual or actual façade) while fully knowing that you are in another far less fantastical reality. When people do VR, they have an omniscient view of a sort, in that they are aware of the multiple realities and can therefore enjoy the unreality of it all. But the unreal is asymmetrical, sensed to some but not others depending on the example, and can be perilous as well as pleasurable.

Thinking about VR simulations vis-à-vis Tsing's article presents an interesting irony from the point of view of product design and accessibility. On the one hand, you might imagine that the mid-2010 resurgence of VR that my ethnography examined — one that was fuelled by Facebook's multi-billion-dollar investment in the tech — would be the epitome of the kind of scalable phenomena that Tsing is (rightfully) critiquing. However, VR was a mass market failure precisely because it didn't scale as its boosters had hoped! This was a significant theme of my fieldwork, during which VR creators lamented its nonscalability. For example, I open the book with Iñárritu's celebrated and award-winning *Carne y Arena*.[10] However, in order to see that piece, I had to physically be in LA and secure a ticket for one of the fifty or so viewings for any given day of its exhibition. Only one person could be in the exhibit at a time, so while hundreds or thousands of museum visitors each day might take in Chris Burden's *Metropolis II* kinetic sculpture near where *Carne y Arena* was being shown,[11] a mere

10 Alejandro Iñárritu, *Carne y Arena* (2017), virtual reality film installation, 7 mins. See '_Carne y Arena', Docubase <https://docubase.mit.edu/project/carne-y-arena/> [accessed 12 May 2026].

11 Chris Burden, *Metropolis II* (2011), kinetic sculpture. See 'Metropolis II', Los Angeles County Museum of Art <https://www.lacma.org/art/exhibition/metropolis-ii> [accessed 12 May 2026].

fraction saw this VR piece. The power of the piece was its 1:1 scale, which rendered it nonscalable.

There is a provocation here, which is that VR's digitality offered the façade of something that was scalable but its materiality revealed this to be a fantasy. Like Cinderella's castle, it was, in practice, something else.

ICI: Going back to the questions of a universalized gaze and situated knowledge, we wonder in what scalar terms would you frame the use of AI surrogates for scientific experiments. Is the simulated human scale a procedure of upscaling or downscaling — and why? To expand the question to the 1:1, or the scale of simulation: if the simulation is always imaginary, and — as in the literary thought experiments — unattainable or absurd when it materializes, why are we so fascinated by it? Jorge Luis Borges's short story 'On Exactitude in Science' describes precisely an empire where cartography becomes so exact that mapmakers create a 1:1 scale map of the entire territory.[12] This device, exactly matching the land 'point for point', ultimately proves useless, crumbling over time and serving as a satirical commentary on the pursuit of total perfection in representation. But what would have changed if Borges had already imagined not a physical map, but a digital map, or one embedded in a virtual reality scene? Is the criticism of the (impossible) 1:1 merely that it is always a 'bad copy', or does it have further implications?

LM: The concepts of the façade and the unreal (and how they work together) is my personal answer to the fascination we have with the 1:1. There is a Netflix show called *Is It Cake?*, where bakers make realistic-looking confections of everyday objects, and judges have to guess before taking a bite whether it is a cake that has been presented to them or the real thing.[13] This is a wonderfully silly show, but it is also an illustration of why the 1:1 is so compelling. A shoe in and of

12 Jorge Luis Borges, 'On Exactitude in Science', in Borges, *Collected Fictions*, trans. by Andrew Hurley (Penguin, 1999), p. 325. The one-paragraph story was first published in 1946 and fictitiously credited to 'Suarez Miranda, *Viajes devarones prudentes*, Libro IV, Cap. XLV, Lerida, 1658'.

13 *Is It Cake?* (Alfred Street Industries, 2022–26). See 'Is It Cake?', Netflix <https://www.netflix.com/de-en/title/81333845> [accessed 12 May 2026].

itself is nothing remarkable, but a cake that looks so much like a shoe that one questions its reality is, the producers of this television show figured out, a total delight. The cake fashioned realistically as a shoe is a façade (it promises one thing but delivers something else), and the pleasure comes when a fork pierces the fondant 'leather', revealing the unreality of the object. This is a ridiculous example, but given that there are thirty-five episodes of this show, it indicates our fascination with the 1:1!

But let me turn, with more seriousness, to the AI surrogate. This case is drawn from my ongoing research (conducted with Molly Crockett) on AI in science, and is a different kind of simulation than the examples pulled from the two books.[14] In both of those cases, I offered examples of simulations that strove, as closely as possible, to resemble reality. When we enter the scientific lab, however, simulations are knowing abstractions by which scientists have made strategic decisions about which elements of the real should be simplified or excluded. The large-language-model-created AI surrogates that some scientists are today implementing in human subjects' research are not meant to replicate an embodied individual, but instead a laboratory participant. Techniques of the laboratory have, over the past century, made the complex human something that can be quantified and studied. In other words, the person who steps into a lab to participate in a study becomes, themselves, a simplified simulation. As with façades, there is an illusion here, which is that when scientists report findings from the lab, these reductions are elided, and claims about 'human nature' emerge from such experiments. The laboratory participant — whether human or AI surrogate — are purposely downscaled humans.

Research with human participants has long had a scaling problem. Like the spectators in *Carne y Arena*, one can only get so many participants into a bricks-and-mortar laboratory. And yet, robust scientific claims in the quantitative social sciences require a large sample size. Much of today's behavioural research has found ways to scale up by further reducing the aspects of the human that are studied in ways

14 Molly J. Crockett and Lisa Messeri, 'AI Surrogates and Illusions of Generalizability in Cognitive Science', *Trends in Cognitive Sciences*, 30.3 (2026), pp. 203–15 <https://doi.org/10.1016/j.tics.2025.09.012>.

that make experiments amenable to online crowdsourcing platforms. AI surrogates promise to further this trend, providing for researchers more participants, faster and cheaper. That these participants are now simulated rather than real has caused less concern than one might imagine.

In downscaling the human participant, those working with AI surrogates have upscaled the reach and power of their experimental findings. Crockett and I caution that the robustness of these findings, and what they actually tell us about the human, ought to be treated with scepticism precisely because of this tension between the downscaling and upscaling.[15] Attention must be paid to how such research claims are being made. Is the downscaling acknowledged or, as is the case for some research groups, are overtures being (falsely) made to the 1:1 nature of these surrogates? In my estimation, AI surrogates are indeed 'bad copies' of the original. However, this isn't necessarily a problem if such simplifications or downscalings are reported, such that appropriate bounds can be placed on experimental claims. The treachery of these bad copies emerges when they are instead passed off as being as good as (or better than) the original. The 1:1 simulation is itself neutral and can be silly and fun (as *Is It Cake?* demonstrates) when the absurdity of its ambition is acknowledged. Or, as is the case with AI surrogates, it can be dangerously misleading when the inherent limitations of simulation are ignored or unacknowledged.

ICI: Pleasure, fascination, and familiarity are all positive feelings that you deem very important for understanding how navigating through scales contributes to the creation, experience, and dissemination of new knowledge. Can you start from here to speculate on the role of affect in the epistemic opportunities opened up by scale, both in relation to soothing or pleasurably unexpected articulations of the 1:1 scale, and unsettling scale jumps?

LM: I have focused on pleasure because, from my ethnographic vantage point as someone who studies the creators of knowledge, the

15 Ibid.

pursuit of the 1:1 model is intentionally and (often) knowingly incomplete. For my examples, affect is a telling heuristic as it signals who is aware of the model's shortcomings (and can therefore be circumspect about the knowledge being produced) and who might not be aware. Lev Manovich has considered the other side of this epistemic equation: how the 1:1 can be used to deceive the consumer of knowledge. In an essay titled 'To Lie and to Act', he includes an example that can sit alongside Cinderella's castle: Potemkin's villages.[16] These are the likely apocryphal architectural façades that Grigory Potemkin, the field marshal for Catherine the Great, would set up along the road as Catherine passed through rural parts of Russia, disguising the desperate reality of the villagers as prosperity. She was being sold a lie, and while Potemkin might have thrilled at the deceit, would any affect accompany Catherine's passing glance at a reasonable-looking countryside? Affect, then, might be a way to track who is in a position to benefit from the kind of knowledge that these plays of scale produce, and who might we be wary of as a potential victim of the lies contained therein.

16 Lev Manovich, 'To Lie and to Act: Potemkin's Villages, Cinema and Telepresence — Notes around *Checkpoint '95 Project*', in *Mythos Information — Welcome to the Wired World*, ed. by Karl Gerbel and Peter Weibel (Springer, 1995) <https://archive.aec.at/print/180159/> [accessed 29 June 2026].

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