

The authors are aware that what they have managed to analyse, in terms of primary sources, is only the tip of the iceberg, as it is clear that the documents released to the wider public are carefully selected in order to paint the best possible picture of the institutions involved. Still, this study manages to introduce us to the continuity of unlawful MI5 conduct. It shows us that to get what was needed, MI5 was breaking the law and had the legal system's help to eventually get away with that. This continuity raises the question whether unlawful conduct of this type of organization is in fact their intended modus operandi, as well as the question of the latent function of the state itself.

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## **Andrei Pop, *A Forest of Symbols: Art, Science, and Truth in the Long Nineteenth Century***

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What is art for? How does it get its meaning? These are some of the questions asked by Andrei Pop in this book. Art 'that works mainly by virtue of its meaning [*sic*]' is what Pop equates with symbolist art (p. 8). Amid divergent political views and aesthetic styles, this book tracks the symbolist movement across the long nineteenth century and in the last decades of that period as the movement gained incoherence after the consistent application of the term 'symbolism' in *Le Symbolisme*, a manifesto published on 18 September 1886 (pp. 30–1).

Stereotypically, the *fin de siècle* is often caricatured by symbolism, occultism and interest in the irrational. A genealogy between symbolism and later artistic movements of Dada and surrealism is also frequently posited. According to Pop, symbolism faced the world of industrial modernity and attempted by word and image to grasp it more firmly. The book contends that the association of symbolism with poetry, literature and painting has eclipsed the intimacy of symbolist thought and philosophical and mathematical logic. The moral implications and political consequences of later nineteenth-century science have thus been sidelined.

The means of representation and the pictorial techniques common to art and science are the subject of this study. *A Forest of Symbols* argues that mathematicians and logicians shared ideas and concerns with symbolist artists, in their querying the notional realism of artworks and texts and wind of empiricism in disciplinary methodologies and claim-making. This saw the challenging of 'the assumption that all science consists of individually experienced observations', which left scant room 'for general laws of nature, opening up the possibility that different observers, differently trained and equipped, may not find any way to reconcile their divergent observations' (p. 11). The book addresses 'the parallel' but distinct project in art and science and problems, some contemporaneous and others ancient, which became increasingly urgent in industrial modernity in 'both

fields' (p. 16). The methodology used identifies questions to perceived problems that were held in common by artists and scientific practitioners.

The argument of Chapter 1, and the general thesis of the book, is that meaning is possible in science and art and that, consequently, there were manifold symbolisms. By frequently drawing on Loraine Daston and Peter Galison's *Objectivity* (2007), Pop tethers the uptake of art and scientific collaboration to the problem of subjectivity and making one's private consciousness understood. The rendering of the visible and intelligible to the subjective distortions of others was both positivistic and hopeful, particularly at a time when the richness of human imaginaries and materialities past and present was elucidated. As Pop asserts, 'This understanding of the symbol as a concept made visible is down-to-earth indeed compared to the romantic desire to express the invisible' (p. 37).

Close readings of the visual and verbal works of Stéphane Mallarmé, Edouard Manet and their visual and verbal translation of Edgar Allan Poe's 'The Raven' (1845) constitute Chapter 2. Nineteenth-century critiques of empirical science and its culture of positivism (p. 42) and tensions between objective and subjective ideas, which deform artists' perceptions of a notional reality, are also discussed (p. 43). Here the binary subjective and objective are equated, respectively, with the humanities and the 'hard' sciences. Subjective human perceptions of colour and the reproduction of these are discussed in Chapter 3, which explores the symbolist duality of material vehicle and mental image via the thought of Vincent van Gogh, James McNeill Whistler and James Clerk Maxwell. The art and theory of symbolism were allegedly ushered in by the circumscription in language, images and sound of 'the private senses' (p. 97). Private language 'as a mass term' (p. 97) makes possible the communication of complex subjective experience and its sharing with others.

*A Forest of Symbols* continues to dissolve the boundaries of the symbolist movement as well as conceptions of it as simply an artistic or literary phenomenon by showing how mathematicians and philosophers might be understood to have participated in its fashioning. Chapter 4 thus analyses self-portraits by the likes of Odilon Redon and Gustave Caillebotte, and by scientists Ernst Mach, William James and others. Gottlob Frege and Ludwig Wittgenstein's theories of pictures as 'logically articulated sensuous objects' (p. 49) close this section, which affirms the knowability of the world in the singular and the possibility of shared understanding. Chapter 5 then turns to pointillism in seeking to juxtapose the aesthetics and methods of Georges Seurat with the pointillist philosophy of Ernst Mach, William James and Bertrand Russell, who are taken to exemplify thinkers whose works successfully reconciled logic and empiricism. The chapter closes with a too-brief discussion of early film as symbolist genre.

*A Forest of Symbols* makes a timely and useful contribution as much in terms of what its investigative scope does do as in terms of what it does not. Pop presents a novel thesis that symbolism looked, as it were, both ways by conceding the possibility of subjectivity and objectivity. In delineating 'the commitment to concrete means, aesthetic and visual, but also logical and philosophical, by which reality, perceived or otherwise, is made accessible to more than one intellect' (p. 16), the core chapters show the erosion of theoretical and mathematical certainties and the reformulation of methods of investigating and knowing. The widening of the social, intellectual and disciplinary frames in which we see symbolist ideas and imagery to have arisen and flourished is laudable. Complementing these aspects of the text, readers will appreciate the endnotes, the detailed indexing and the quality of the numerous illustrations that include both reproduction of black-and-white prints and colour plates. The latter include three joyous works from Alphonse Allais's playful *Album primo-avrilesque* (1897).

A few quibbles remain about this work, which will be put to use by historians and philosophers of human and physical sciences, historians of scientific instrumentation and

metrology, and historians of art. The expression is a little dense in places, even unclear in others: there was a simpler way to state this argument.

Pop readily admits that he does not stick to biography or chronology. This results, to my mind, in several problems of scale. The theosophist architect Claude Bragdon's hypercube in 'The archetypal world [the cube] and the phenomenal world [the square]' (1912) (pp. 11, 13) shows that what we see is just a two-dimensional cross-section of a higher-dimensional four-dimensional reality that is invisible to most observers. My sense is that *A Forest of Symbols* is very much like Bragdon's phenomenal plane: the scaffold of the book, for all its claims to jettisoning biography and chronology, is there; its scope is the transition from what is broadly construed as Romanticism and the shift to realism, symbolism, impressionism and post-impressionism. Moreover, the significance of more voluminous spaces and additional scales is not attended to. That is to say, the book's arguments would be unsettled by positioning his claims within wider historical geographical light.

That histories of symbolist images and thought are rooted in sliding scalar historical and geographical imaginaries is not recognized here. Historically and geographically, particular material cultures and sociocultural worlds and belief systems were displayed to avid audiences in capital cities such as Paris at this time. Such matters inform nineteenth-century scientific and artistic symbolists' concerns about communication and intelligibility. Consensus and 'the very possibility of understanding an artwork was at stake, depending on some degree of agreement, both perceptual and conceptual, between artist and audiences' (p. 11). Yet it is worth noting that the latter, various publics and the reception of works and ideas, are largely absent from this work.

The nineteenth century saw ongoing wrestling with multiple empiricisms as communities of practitioners diversified, as novel instruments were constructed and made available, as disciplines multiplied and new standards and measures were conceived, and as their attendance to experience and perceptions of what constituted evidence changed. Pop attends to physics and optics, and practitioners in these areas. But photography only figures here with references to daguerreotypes, X-rays and cinema. Omitted are the optical toys and illusions of popular shows, new forms of camera accessible to a widening and diversifying consumer base, and the widespread practice of lantern projections and lectures. The ontological problems of subjectivity and objectivity, and the relations between these ideas, arose from the belief that it was necessary to reconcile scales of vision, imagery and understanding. That the latter were both human and technological is insufficiently examined.

There is therefore little sense of how symbolist images kaleidoscoped in relation to optical instruments that were so central to shifting scientific methodologies, subjects and scales of sciences in fission in the nineteenth century. Allusions to interdisciplinarity are present here and the work will speak to histories that are currently being written about the depth of interdisciplinary exchanges. However, although the slipperiness of the natural sciences is recognized, the book does not venture into the emergent disciplinary territory of anthropology. French ethnologists such as Emile Durkheim certainly warranted some attention here.

This brings us to another issue: the imagination is not the preserve of any one community, discipline or medium. How geographically and socially diverse human imaginaries related to symbolism is barely addressed here. Some readers will lament the too-brief allusions to discussions about identity, perception and the constructedness of meaning, including racial categories (p. 29) and gendered identities such as womanhood (pp. 30–1).

Lastly, the assertion that the work is intended to inform the state of twenty-first-century humanities subjects and their chronic 'tribalism' cannot be

overlooked (p. 31). In the conclusion, which is otherwise helpful, Pop states that the philosophy that grew from Nietzsche's theories, 'and that has dominated intellectual life in university humanities departments in the latter half of the twentieth century, was blissfully indifferent to science and logic' (p. 236). Pop does not sufficiently scrutinize or sustain the sideswipes at twentieth- and twenty-first-century humanities. They add nothing to our understanding of nineteenth-century symbolism. Nor do they justify the contemporary relevance of this book to matters of truth or 'post-truth'. Although *A Forest of Symbols* purports to attend more broadly to the connections between the symbolist movement and the emergence of the discipline of art history, the big questions with which it and this review open required more space to be adequately answered.

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