

JAMES SWINSON*Paper:* **THE IMPURE AND UNPREDICTABLE LINES OF FLIGHT****Abstract:**

In all processes: scientific, creative or social, change and insight emerges from dissidence, flaws or mistakes. These anomalies are generated in the virtual, the present where past and future eternally meet offering the potential for creative lines of flight.

The technologies that emerged in the second industrial revolution underpinned the machine aesthetics of the historic avant garde movements of early 20th century. Any illusion that this phase of technological and artistic advance would automatically lead to mass emancipation, was crushed by Stalinism and the destructive force of the Nazi war machine.

Mass culture and production attracted authoritarian notions of order and conformity that chimed with intellectual frameworks obsessed with fixed and timeless structures, typological thinking, purity and certainty . As Primo Levi eloquently argued change emerges from the impure and unpredictable, a notion that is anathema to all repressive, authoritarian, regimes. While Manuel DeLanda contrasts the rigid Euclidian mechanics of assembly line production with the adaptive, organic, biological processes of tissue generation.

In the aftermath of WW2 like a phoenix rising from the ashes, dynamic generative code placed an emphasis on process over structure with the potential to re-define disciplines and social fields. Alan Turing's universal machine, anticipating the infinitely adaptable, programmable computer, emerged from the convergence of mathematical problem solving, wartime code breaking, and speculations on the human mind. Watson and Crick's double helix as the configuration for the production of life, was derived from photographic interpretation and tinkering with Heath Robinson-like models.

Paradigm shifts in mathematics and molecular biology were matched by the insights of artists coming to terms with the de-locating force of machine warfare and mass production driven consumerism. Avant garde film-makers and writers challenged the fixed codes of mainstream narrative literature and action cinema. Andy Warhol's silkscreens and films messed with the repetitive codes of mechanical reproduction and Gerhard Richter manipulated the 'virtual smudge' of the photographic event.

Topic: ART, SCIENCE THEORY**Authors:****James Swinson**

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