Fanchon Fröhlich: The Liverpudlian Polymath

Hana Leaper[1], Anna Roberts[1]

[1]Liverpool John Moores University

*Corresponding author: a.r.roberts@ljmu.ac.uk

Introduction:

Fanchon Fröhlich was an artist, scientist and philosopher who engaged with the foremost practitioners of her age in each field [figure 1]. Born in Iowa in the US in 1927, Fröhlich, nee Audrey Fanchon Angst, studied for her first degree in Philosophy of Science at the University of Chicago. In 1949, 22-year-old Fanchon Angst travelled to the UK to begin her postgraduate studies in Linguistic Philosophy at the University of Oxford (BADA, d.u). During her voyage to Oxford, she met the experimental physicist Herbert Fröhlich. Born in Germany in 1905, after earning his Doctorate in 1930 Herbert Fröhlich went to work at the Ioffe Physical-Technical Institute of the Russian Academy of Sciences. In 1935, he emigrated to England due to the escalating fascist violence in Russia and Europe. He worked at the University of Bristol between 1935-1948, when he was employed to fill the Chair for Theoretical Physics at the University of Liverpool. The pair married in 1950, whereupon Fanchon Fröhlich (henceforth Fröhlich) resumed her studies at Oxford, graduating with a Bachelor of Letters degree in 1953 (Hyland. 2016).

Contemporaries of Fanchon Fröhlich:

Fröhlich began to hone her Fine Art practice during the 1950s when she studied art at Liverpool College of Art and travelled to Cornwall to work with established Abstract Expressionist artists associated with the St Ives School, and in particular Peter Lanyon. During the 1960s, Fröhlich spent time in Paris working with the sculptor László Szabó, and at Atelier 17 with printmaker Stanley William Hayter. In 1972 she went to Kyoto to study ink painting (Hyland. 2016).

Figure 1. BADA (2021) *Print of Fröhlich with paintings in the garden at Greenheys Road, Liverpool*. [photograph]

During these decades, the Fröhlich's hosted 'a long list of distinguished scientists, artists, writers, composers, and assorted polymaths at their rambling home' (BADA, d.u, paragraph 3) in the Princes Park area of Liverpool, near the University and College of Art. Recognisable names include the Nobel-Prize winning physicist Erwin Schrödinger, novelist Beryl Bainbridge, and composer John Cage.

The exhibition 'The John Moores Painting Prize and the Rise of Liverpool in the 60s (Exhibition Research Lab, 2019) demonstrated that during this period, the city was a crucible for post-war, cultural revival. Photographs and archival materials from the Walker Art Gallery relating to the John Moores Painting Prize show that the exhibition attracted the very best of British artistic talent to the

region. Local school children and aspiring artists were inspired by visits to the Prize, and images of student work show that the Liverpool School of Art was thriving. The vibrant interplay of art, music, fashion, theatre and poetry around the city created a hothouse of radical culture. Figures like Adrian Henri and John Lennon connected these scenes and went on to promote them worldwide.

As Allen Ginsberg famously wrote in 1965, that Liverpool is the "centre of human consciousness in the world" (Jones. 2015, paragraph 1.). The Fröhlichs were at the eye of the storm, both producing important scientific and artistic breakthroughs, and encouraging those around them to partake in the maelstrom [figure 2]. Despite the unidisciplinary rhetoric of the nineteenth and twentieth centuries, Fanchon saw how art and science 'have co-existed, often indistinguishable from each other, across time and space' (Zhu. and Yogesh. 2019, paragraph 3, pp.1).

Figure 2. Fröhlich, F. and Gough, J. (d.u.) *FF363 – Untitled. Collective Phenomena Composition with Judy Gough.* [Charcoal]

Collective Phenomena:

In 1991, Fröhlich founded Collective Phenomena, a group of painters ‘who collaborated on a single surface, one continuing or contradicting the lines of the other in a kind of visual counterpoint’ (Hyland. 2016). Fröhlich took the Jungian ideology of the unconscious as guiding principle, with participating artists ‘driven by unconscious processes’ (Reed. 2008).

Herbert Fröhlich's research on Cooperative Phenomena, was a key inspiration for Fröhlich's collective, as it drew on the theme of collective coherence. His research proved ground-breaking in studying atoms and particles as a collective phenomenon, not as separate entities. This insightful research paved the way for interdisciplinary investigations using physics and biology, such as quantum biology, a field that Erwin Schrodinger studied (Ouellette. 2019).

Herbert’s’ study into Cooperative Phenomena highlighted how large-scale behaviour emerges from small, complex and asymmetrical interactions (Beri. *et al*., d.u.). Begun in the aftermath of her husband’s death, his notions of Cooperative Phenomena underpin Collective Phenomena, as individual painters who collectively and unconsciously produce complex happenings that merge into one large-scale phenomenon of conscious coherence (Beri. *et al*., d.u.). Fanchon Fröhlich relished in creating these aesthetic happenings by reflecting the asymmetrical and transitory qualities that she recognised as existing across the arts, sciences, and human life.

Reminiscent of the Automatic Drawing processes used by the Surrealists, the artists participating in Collective Phenomena sought to free themselves from the constraints of the rational mind and resist conscious control (MOMA, d.u.). The artistic term and process of Automatism, originated from the psychology of Sigmund Freud, in which he used automatic writing and drawing to psychoanalyse patients (MOMA, d.u.). Fanchon Fröhlich, and perhaps Herbert also would have been familiar with the automatic drawing methods practised by her teacher at Atelier 17, printmaker William S. Hayter [figure 3], and echoes of similar methods can be seen in Fanchon Fröhlich’s prints [figure 4].

Figure 3. Hayter, W. (1960) *Fond de la mer II*. 65.5x50cm. [Etching]

Figure 4. Fröhlich, F. (d.u.) *FF217.2 - Zodiacal Stream*. 27x40cm [Etching with Ink on Paper]

Collective Phenomena was also established as a series of performance sessions with accompanying music by musician and maths teacher, Lawrence Ball (Reed. 2008) [figure 5]. Ball became a key figure at Collective Phenomena, providing a visceral and cerebral soundscape in the studio, a soundscape that is transcribed through the artists' unconscious, into the work itself. Using a method called Harmonic Mathematics, Ball was able to produce musical scores that reflected and fostered the spontaneous but focused environment of Collective Phenomena (Ball. 1999). Performance and movement became a key element of Collective Phenomena, through expressing the dynamism of life – a fundamental component within Physics, which notes that nothing is ever truly static, according to atomic behaviour (Jackson. *et al*., 2016).

Figure 5. BADA (2021) *Photo of Collective Phenomena at the Blackie with Lawrence Ball and 3 female artists*. [Photograph]

Although Fröhlich remained a relatively unknown figure within the art world, and particularly within the field of Abstract Expressionism, her pioneering work connected pictorial experimentation with the leading scientific theories of the mid-century, creating sustained and innovative aesthetic enquiry, which is only now becoming appreciated by the academic community.

References:

BADA. (d.u.) Fanchon Fröhlich. *British Art and Design Association* [online]. Available at: https://www.badaart.org/fanchon-fröhlich/ [Accessed: 21st September]

Ball, L. (1999) Theory and Application. *Meditational Music* [online], 24th May 1999. Available at: https://meditationalmusic.net/theory-application/ [Accessed: 23rd May 2023]

Beri, B. et al. (d.u.) Collective Phenomena. *Theory of condensed Matter, University of Cambridge.* [online] Available at: https://www.tcm.phy.cam.ac.uk/research/collective.html [Accessed: 23rd May 2023]

Hyland, G. 2016 Fanchon Fröhlich obituary [online]. Available at: https://www.theguardian.com/artanddesign/2016/sep/08/fanchon-frohlich-obituary Accessed: 21st September 2023]

Jackson, V. et al. (2016) *Women of Abstract Expressionism, Royal Academy of Arts* [podcast], 12th December 2016. Available at: https://soundcloud.com/royalacademy/women-of-abstract-expressionism. [Accessed: 21st June 2023]

MOMA (d.u.) Surrealism. *Museum of Modern Art.* [online] Available at: https://www.moma.org/learn/moma_learning/themes/surrealism/ [Accessed: 13th July 2023]

Reed, J. (2008) Fanchon Fröhlich – retrospective exhibition. *Gallery 4 all arts*. [online] 9th February – 3rd May 2008. Available at: https://www.gallery4allarts.com/Fanchon%20Fröhlich%20exhibition.htm [Accessed: 17th May 2023]

Ouellette, J. (2019) Quantum physicists in the 1920s helped found field of quantum biology. *Arts Technica* [online], 6th December 2019. Available at: https://arstechnica.com/science/2019/01/quantum-physicists-in-the-1920s-helped-found-field-of-quantum-biology/ [Accessed: 13th July 2023]

Zhu, Lian, and Yogesh Goyal. (2019) "Art and science: Intersections of art and science through time and paths forward." [online] *EMBO reports,* vol.20 (2): e47061. doi:10.15252/embr.201847061 [Accessed: 21st September 2023]