

scenes as a way of looking into the nature of agency and rhetoric in computer games, emphasizing the ways in which cut scenes and gameplay interact to form a distinct language of dramatic expression.

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Cyberfeminism

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The evolution of the term *cyberfeminism* is not easy to trace and is evocatively nonlinear and variegated in its applications. Examining the terms that make up the compound word offers a logical starting point. The "cyber" part of cyberfeminism is typically taken to denote cyberspace—"feminisms applied to or performed in cyberspace" is *Wikipedia's* roomy yet convincing definition (see *CYBERSPACE*). American feminist theorist Donna Haraway's cyborg feminism (see *CYBORG AND POSTHUMAN*) is another formative source. Haraway's celebrated 1985 essay "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century" (reprinted in Haraway 1991) embraced the cyborg metaphor in order to argue for the inclusive transgression of boundaries (gender, race, difference) and the development of deliberately hybrid social identities. Unsettling cultural feminist critiques of technology with a purposefully ironic stance, her article famously concluded, "I'd rather be a *cyborg* than a goddess." The participants in the 1994 London conference "Seduced and Abandoned: The Body in the Virtual World," among others, describe cyberfeminism as the direct heir of Haraway's cyborg feminism, although the theorist's essay predates both the term *cyberfeminism* and the widespread recognition of cyberspace by several years.

If relatively few writers dispute the relevance of the "cyber" in cyberfeminism, the place of feminism, in contrast, has been frequently debated. The all-female artist and activist collective VNS Matrix (Adelaide, Australia; 1991–1997) was likely the first to unite the terms with their poster entitled "A Cyberfeminist Manifesto for the 21st Century" (1991). The humorous and polemical manifesto provocatively imbued new media technologies with feminine characteristics: "we are the virus of the new world disorder / rupturing the symbolic from within / saboteurs of big daddy mainframe / the clitoris is a direct line to the matrix." British philosopher and writer Sadie Plant, among the earliest proponents of cyberfeminism, proposed that the social relations engendered by new digital

technologies are intrinsically associated with women and the feminine. Her best-known text, *Zeros + Ones: Digital Women + the New Technoculture* (1997), argued that actions such as nonlinearly distributed processes should be embraced as “positively feminine.”

Many self-identified cyberfeminists took issue with the utopian technophilia and biological essentialism embedded in approaches such as those of VNS Matrix and Plant. American artist and activist Faith Wilding’s influential essay “Where Is the Feminism in Cyberfeminism?” (1998b) brought the issue to the forefront, critiquing the deliberate or willed ignorance of alternate political feminisms among many cyberfeminists. Wilding and Cornelia Sollfrank popularized a variant application of the term *cyberfeminism* as part of their work with the activist group Old Boys Network (OBN), founded in 1997 in Berlin. For the OBN, cyberspace was understood as entirely consistent with patriarchal society: “Cyberspace does not exist in a vacuum; it is intimately connected to numerous real-world institutions and systems that thrive on gender separation and hierarchy”; cyberfeminism, accordingly, should be a political undertaking committed to creating and maintaining real and virtual places for women in regard to new technologies—such as creating new feminist platforms and resources, including hands-on techno-education for women and working directly with code—while also critically assessing the “impact of new technologies on the lives of women and the insidious gendering of technoculture in everyday life” (Wilding 1998a, 49).

Cyberfeminism, and the OBN in particular, has had particular resonance within the visual arts. OBN appeared in the spotlight in the 1997 international art exhibition *Documenta X* in Kassel, Germany, where the group hosted the First Cyberfeminist International (CI). Seeking to resist rigid definition, the CI published what they called “100 anti-theses” (OBN and the First Cyberfeminist International 1997). Incorporating several different languages, the one hundred anti-theses defined what cyberfeminism, according to the CI, was *not*; for example: “12. Cyberfeminism is not an institution”; “19. Cyberfeminism is not anti-male”; “40. Cyberfeminism is not essentialist.” The subRosa collective (founded by former OBN member Faith Wilding in 1998)—an international group of cultural researchers who combine art, activism, and radical politics to explore and critique the intersections of digital information and biotechnologies in women’s bodies, lives, and work—continues to be at the forefront of art and cyberfeminism.

No matter how diverse the strategies proposed by self-identified cyberfeminist activists and writers, all share a commitment to critically engaging rather than hastily discounting all things “cyber” (read: new media technologies, as well as their cultural and social contexts). Social and political activism has been an important component of cyberfeminism, and writers have brought the term to bear in a range of disciplinary contexts—including art, sociology, law, political theory, biology, genetics, computer science, cyberpunk, and sci-fi—both inside and outside of cyberspace (in order to reach those who lack Internet access). The specific terms of cyberfeminist engagement have tended to shift alongside the goals of broader feminist ideological positions. If early efforts concentrated on getting women to participate more fully in what was understood to be “masculine” technological realms, subsequent cyberfeminists, informed by postcolonial theory, have focused on ethnic and racial difference, interrogating the various conditions that uphold our techno-dependent society, as well as the digital divide.

The term *cyberfeminism* was coined in 1991, and cyberfeminist activity flourished throughout the 1990s, coincident with the early excitement and anxiety associated with the wide-scale introduction of the World Wide Web and networked computing. Since

then, the term *cyberfeminism* has achieved a global reach (albeit with an Anglo bias). Cyberfeminism has been the topic of conferences, edited volumes, articles, and art exhibitions all over the world, and it is impossible to identify any single definition at present. In today's climate of ubiquitous computing and information flows, some have asked if the term *cyberfeminism* may have outlived its usefulness. In the twenty-first century, it seems apparent that all politics, feminist or otherwise, must confront the "cyber." On the other hand, it's important to note that cyberfeminism has suffered the neglect of other feminist projects; many new media historians and critics consistently overlook the role of cyberfeminism in historical and contemporary theories of technology, lending a special political urgency to its historicization.

■ See also GENDER AND MEDIA USE, GENDER REPRESENTATION, VIRTUAL BODIES

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Cybernetics

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Cybernetics, like many metadisciplines, evades easy definition: there may now be as many definitions of cybernetics as—or perhaps more than—there are self-identified cyberneticians. Since the mid-1940s, its amalgamation of themes of communication and control in computational biological, social, and symbolic systems has inspired and bedeviled researchers across the natural sciences, social sciences, and humanities. Accounts have variously identified cybernetics as a science of communication and control (Wiener 1948), a universal science (Bowker 1993), an umbrella discipline (Kline, n.d.), a Manichean science (Galison 1994, 232), and a scientific farce founded on sloppy analogies between computers and human organisms (Pierce 1961, 208–227).

MIT mathematician Norbert Wiener is often credited with launching the field with his book *Cybernetics: Or Control and Communication in the Animal and the Machine* (1948). Wiener based *Cybernetics* on his World War II research aimed at better integrating the agency of human gunners and analog computers within antiaircraft artillery fire control