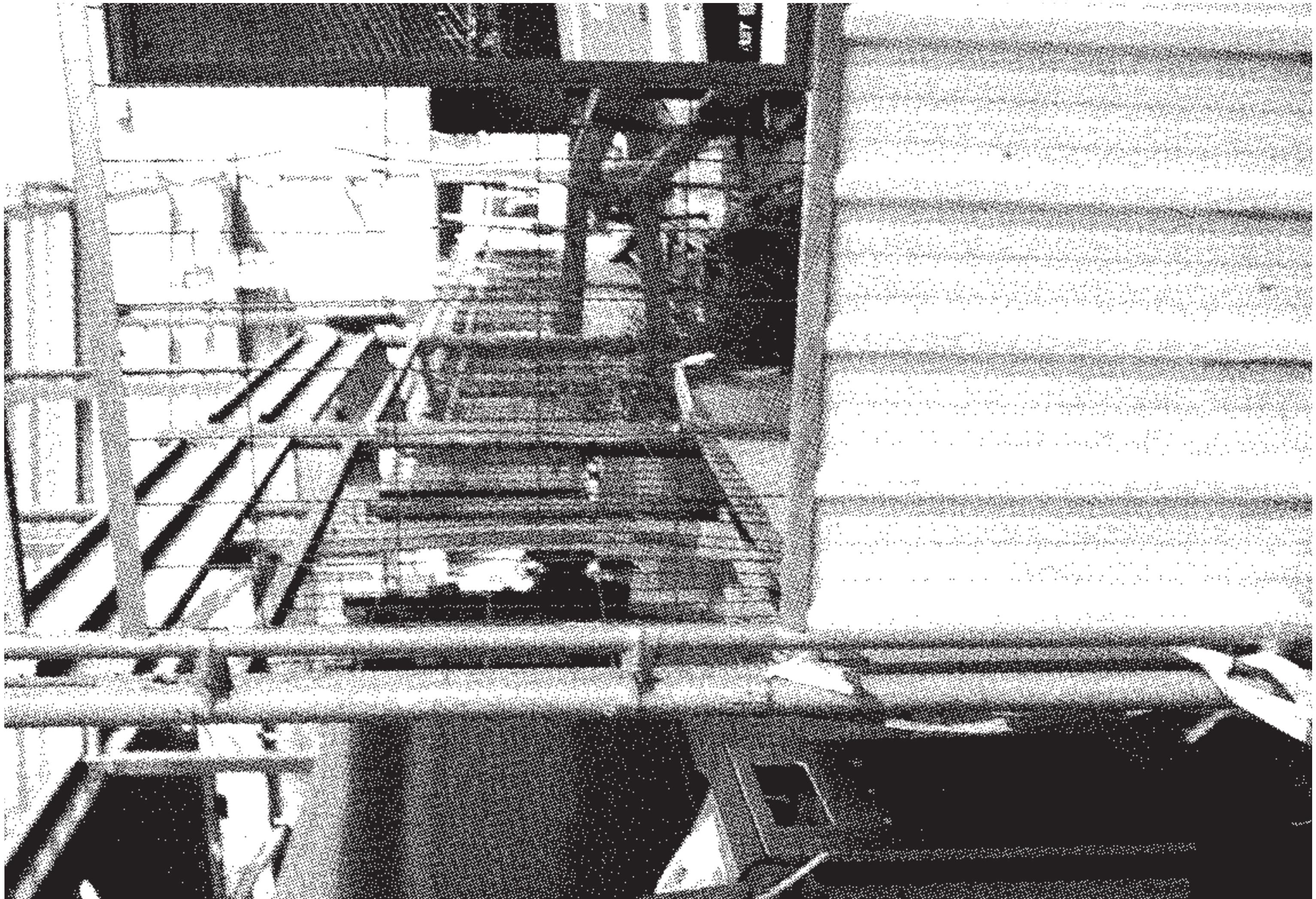

Volker Sattel's *Unter Kontrolle*
Review by James Macgillivray

> By the way, something I didn't mention: in Germany we have a unique "fourfold redundant" safety system. There must be four of all machine components, all the pumps, everything related to the nuclear reactor in the safety procedure.
>
> —Tour guide at Grohnde Nuclear Power Plant, Lower Saxony

In 1978, Andrei Tarkovsky filmed *Stalker* in a bombed out hydroelectric dam in Tallinn, Estonia. The film takes place in the aftermath of an event—a meteorite or an alien visitation—that imbues a place, "the Zone," with certain invisible forces and a room at its centre that will grant the innermost wish of the person who enters. The title character, the *Stalker*, is hired to guide people through the now heavily guarded Zone to get to the room. The spatial diagram of a powerful nucleus (the Room) at the centre of a cordoned-off perimeter (the Zone) is complicated by the fact that the space between the perimeter and the centre is not monolithic, but highly differentiated. A benign-looking field of buckwheat must be deftly navigated with the help of trial and error projectiles; characters lose one another only to find each other again by staying still; in the Stalker's words, "I don't know what goes on here in the absence of people, but the moment someone shows up everything comes into motion."

The ambivalent power of the Zone's presence was perhaps indicative of the more banal menace that really did exist on the site of *Stalker* during shooting; upriver from the Jägala Falls dam, a chemical plant was draining effluents into the river water that permeated every shot of the film. Characters in the film are constantly in the presence of this water, drenched by it, wading through it, or lying down in it. In the years following the film's production, several of the people involved died of the same strain of lung cancer, including Anatoly Solonytsin, Larissa Tarkovskaya, and Tarkovsky himself.

Eight years after Tarkovsky left the Zone, and months before his death, the 4th reactor of the Chernobyl Nuclear Power Plant experienced a catastrophic power increase that led to the explosion of its core. In the aftermath of the disaster, the Soviet government put in place a 30-km-radius exclusion zone around the plant. Although Tarkovsky's film doesn't reference nuclear disaster, his creation of the invisible presence of the Zone has served as an archetype, the formal depiction of nuclear disaster. Twenty-five years after the disaster, guides calling themselves "stalkers" offer tours of the nearby, abandoned town of Pripyat. But here, the Geiger counter takes the place of intuition in navigating the exclusion zone.

Volker Sattel's *Unter Kontrolle* (2011), filmed in working and decommissioned nuclear power plants between 2007 and 2010, cannot help but address the legacies of Chernobyl and Tarkovsky's Zone. The film provides a relatively unedited progression of footage through nuclear power plants, and other secondary and tertiary levels of the nuclear energy industry. Talking heads are kept to a minimum; technicians, officials, scientists, and regulators are only heard from when they give critical information or provide moments of dark, oblivious humour ("So it's the red button, Uwe?" says one, contemplating an espresso machine). Although it is a documentary, it inhabits the formal archetype of Tarkovsky's Zone. The dominant structure of the film is formed by the tectonics of the camera and the spaces created by its movement. Yet, while the movement of the camera in *Stalker* maintains a lack of smoothness, for example, on a diesel-run handcar travelling along a bumpy track or in the hesitating gaze of an unknown presence, *Unter Kontrolle* avails itself of machine-milled smoothness. The robotics that are shown in the film to smooth the movements of their human nuclear power plant operators could have been used as the apparatus for filming the longer shots. Whereas the long shots in *Stalker* serve to differentiate the otherwise unambiguous layout of the Zone—that between perimeter and centre—the camera movement in *Unter Kontrolle* becomes a pure expression of the variegated spaces and machines of the nuclear industry.

Nuclear technology and the mere existence of a nuclear industry would appear to be the radical application of a materialist worldview: the confident materialist labours undaunted in the everyday application of physical laws towards a class of matter whose harmful aspect is invisible, eternal, and fatal. At the Institute of Risk Research in Vienna, an academic lays out the scale: "Plutonium, for example, has relatively weak emissions, but it can't be allowed to enter the body. The World Health Organization says a millionth of a gram can cause lung cancer. Extrapolating from that, one gram would give a million people lung cancer, a kilo a billion, and a few kilos all of humanity…There are substances that must be kept out of the biosphere for an unfathomable amount of time. There are certain isotopes, cesium isotopes, and others, that have half lives of 1.5 or even 15 million years." Radiating outward from the infinitesimal centre of active material are concentric offsets of protection. The centre-perimeter paradigm of Tarkovsky's Zone is re-enacted in the three-foot-thick, steel-encased concrete walls of the reactor, in the showering vestibules at the plant's entrance and in the metres of water that cover the fuel rods as they go from the reactor to storage.

Still from *Unter Kontrolle*, 2010

Beyond the the safety of this material offset, the human factor, either in threat or in error, comes to the fore as the protagonist of the film's disaster scenarios. In the face of a human threat, the notion of a buffer zone is taken to extremes. The zones spin off into myriad territories, spreading out until the threat is exhausted. Terrorism, for example, personified in an airborne, visually guided attack, has spawned the remarkable formal innovation of a ground-deployed smokescreen, a 300-metre-thick blanket of smoke that can be augmented with a so-called "GPS jamming/spoofing system" to obscure the target of the station from those approaching by airplane. In turn, the manufacturer of the smokescreen, Rheinmetall Defense, spins off further into its own zones. Testing facilities and "proving grounds," run by their subsidiary Rheinmetall Waffe Munition GmbH, preside over a vast 50-square-kilometre swath of bombed out fields in Unterlüß.

If the human factor is in error, the offsets proceed in similar fashion. At the Powertech Training Centre in Essen, one trainer hedges the factor of human error with a buffer zone, literally blocking out the possibility of human decision: "We define tasks performed by humans and tasks performed by technology, and our facilities are designed to account for human error. And we all make mistakes, ten an hour on average… that can be risky when dealing with nuclear technology. That's why the facilities have automated mechanisms that decide what action to take in unclear situations." Human error not only pushes outward in offsets of automated failsafe, but proliferates humans as well. Almost in response to Schopenhauer's charge that "materialism is the philosophy of the subject who forgets to take account of himself,"[1] the nuclear industry radiates outward in ringed forms of bureaucratic architecture. As if to say, we will account for subjectivity by proliferating subjects.

Scenes of the International Atomic Energy Agency take place in architect Johan Staber's Austria Centre in Vienna. In a vast semi-circular room reminiscent of the cooling towers from earlier in the film or the UN General Assembly, a lone official maintains that although the amount of plutonium required to create a nuclear bomb is 8 kg, they account for "every last gram" of nuclear material in a country. In 1968, Sol LeWitt, contemplating a similarly rare and guarded material, the jeweled Cellini Cup, proposed to encase it in a cube of concrete. Indeed, concrete, deployed in LeWittian fashion, is the medium of choice for the land artists of nuclear disposal. So-called "geological disposition" entails the mixing of radioactive waste water with concrete, pouring that concrete into barrels, burying those barrels in granite 600 metres below the earth's surface, and finally backfilling the entire underground system of caverns with even more concrete.

Concrete is the copious and obvious response to water. Water, the dynamic and essential element of the nuclear industry, is indispensable in all aspects of generation, safety, and remediation. Perhaps the most impressive footage in the film is of a spent fuel rod being moved from the reactor into storage. The entire operation needs to happen under a considerable amount of water, all of which is extremely radioactive. This liquid in the film helps to give expression to the invisible presence at the centre of all the offsets. In *Stalker*, Tarkovsky, the mystic, provides the antithesis for the glowing water of the materialist masterpiece: in a long downward looking tracking shot, the camera hovers over a shallow pool of water covering assorted detritus. As we recognize in this material—a gun, a razor blade, a syringe, a shell casing, a postcard of a painting by Van Eyck—the text of the Zone, its character begins to clarify. Buffers that were breached, fail-safes that failed, and a human factor in catastrophe—these are the touchstones of the exclusion zone.

Note

1. Arthur Schopenhauer, *The World as Will and Representation*, Volume II, trans. E.F.J. Payne (New York: Dover), 13.

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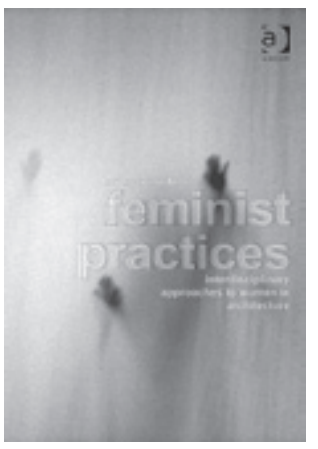

Feminist Practices: Interdisciplinary Approaches to Women in Architecture
Lori A. Brown, ed., Ashgate Publishing Limited, 2011, 371 pp.
Review by Scott Sørli

Feminist Practices is assembled into four thematic groupings: design, pedagogy, design research, and communities. Apart from these sections are editor Lori Brown's introduction, conclusion, and editorial prerogatives providing coherence to an increasingly diverse and productive field. Two chapters, however, slip away from the structure of a book. Jane Rendell's chapter "Critical Spatial Practices" and Despina Stratigakos' chapter, "Inventing Feminist Practices," are placed outside of the four themes. The decision not to force-fit these two chapters into one of the four broad categories of the book allows them to open up content that doesn't necessarily conform to the other categories. This is a feminist editorial decision. Not one of content, not one of form, but one that smoothes the strictures of form to receive and hold content without forcing it to follow a rigid structure. This permission is an elegant means to accept and embrace work that would otherwise fall outside, or worse, be forced in.

Domesticity is a theme throughout the anthology. One meaning of domesticate is to tame, and the place of taming is the home. The complex, ambivalent relationships encircling domesticity provide productive territory for feminist practices in architecture. There are many territories, institutions, and subjects problematized viscously in the works of *Feminist Practices*, but for the purpose of this brief review, domesticity stands in for the whole.

The first section, "Feminist Practices of Design," features five designers whose work engages the sophisticated and subtle inter-relationships of the body and surroundings. Lori Brown asks several questions of this group in the introduction, among them: "How is privacy understood within the domestic sphere and how is this idea materially reinforced? [...] How can the furniture with which we occupy space be reconsidered and redesigned so as to neutralize any gendered associations?"[1] Domesticity has historically been seen to be feminine—a woman's place, her domain. In these practices, privacies are shown in the processes of being reinforced and undermined, genders neutralized and intensified, while all are multiplied. In Kyna Leski's "Sister" chapter, the vision of a dream home transformed into a project for a Shadow House makes a virtue of that delicious morning moment of falling back asleep just after the alarm goes off. For two sisters, one who might be a heroine, the other perhaps heroin, the shadow house nods off, "no longer recognizable, having been dramatically transformed and re-constituted […] we no longer understand public and private, shade and shadow in the same way again."[2] This smooth drift away from a hierachical type undermines the conventions of residential construction and space planning toward a realizable dream image of (un) domestication.

The "Pedagogy" section provides examples of full-scale design-build studio practices that challenge "normative student-teacher relationships, the classroom's hierarchical structure, and the professor's role in the class."[3] It is easy to teach a class full of alpha types: praise the strong ones and watch the rest run to catch the leader. It is harder and more rewarding to engage and collaborate, to discover each student's personal aspirations, and to walk that path together. In this, Margarita McGrath's 2006 Taipei studio is exemplary, investigating the mundane and the worldly. There's a generational divide that she points to when she writes in her piece "Fishing for Ghosts": "I'm in my 40s. It *is* bold to reveal one's age, but in this discourse I think it is critical."[4] She writes of the "wave of feminism" in architecture schools that straddled the late 80s and early 90s, a time when academic institutions were struggling with the new gender parity of the student body.

Feminist Practices proposes a definition of "feminism as relational and constantly shifting."[5] Öslem Erdogdu Erkaslan and Meghal Ayra research the domestic realms of detached housing and apartments in Turkey, and courtyards in Indian domestic spaces, respectively. The movement among individuals and communities through territories can also be traced to institutions. For example, the same dearth of support can be seen in the atrophying of women's studies in academia as well. While this line of thought is beyond the scope of this review, it points to an institutional crisis at hand.

The final section, "Feminist Practices in Communities," features projects engaged within specific and varied communities. Janet McGaw, in "Urban Threads," works with homeless women (the undomesticated) to make private realms in public spaces. This empowering work is the definition of community, in practice and execution. Liza Fior and Katherine Clark of the design practice muf, equate civic work with citizen input, through the design process as much as built work. These projects are architectural examples of relational aesthetics—where the work lies in the acts that are co-construed; the civic moments that arise belong to the citizens who bring them about.

This is a very important book; the bibliography at the end of Jane Rendells' opening chapter, "'Critical Spatial Practices'," alone is worth the cost of the book. It provides a survey of feminist practices and literature from the last decade of the 1900s and the first of the 2000s, a survey that is unavailable anywhere else. Students of any gender and designers of all genders cannot claim to be adept at working in this contemporary territory without availing themselves of this resource.

I worry that because it is 'feminist' men wouldn't dream of picking it up, and that women will pause before buying it: so I appreciate the definitions of feminisms that Lori Brown provides. They have nothing to do with gender. First, she writes, "feminist practices are political acts that seek to challenge the status quo and identified relationships of power." And second, that "there are those who work to improve and better the lives and spaces of others, concerned with larger social justice efforts, but may never call themselves feminist."[6] She follows with a quote from bell hooks, who writes, "we can live and act in feminist resistance without ever using the term 'feminism.'"[7] Maybe we don't have to say it if we find the word limiting. Lori Brown challenges us to re-define the term for ourselves.

Notes

1. Lori A. Brown, ed., *Feminist Practices: Interdisciplinary Approaches to Women in Architecture* (Aldershot: Ashgate, 2011), 7.
2. Ibid., 8.
3. Ibid., 9.
4. Margarita McGrath, "Fishing for Ghosts," in Lori A. Brown ed., *Feminist Practices: Interdisciplinary Approaches to Women in Architecture* (Aldershot: Ashgate, 2011), 233.
5. Brown, *Feminist Practices*, 10.
6. Ibid., 367.
7. Ibid., 368.

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