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## Smart Borders

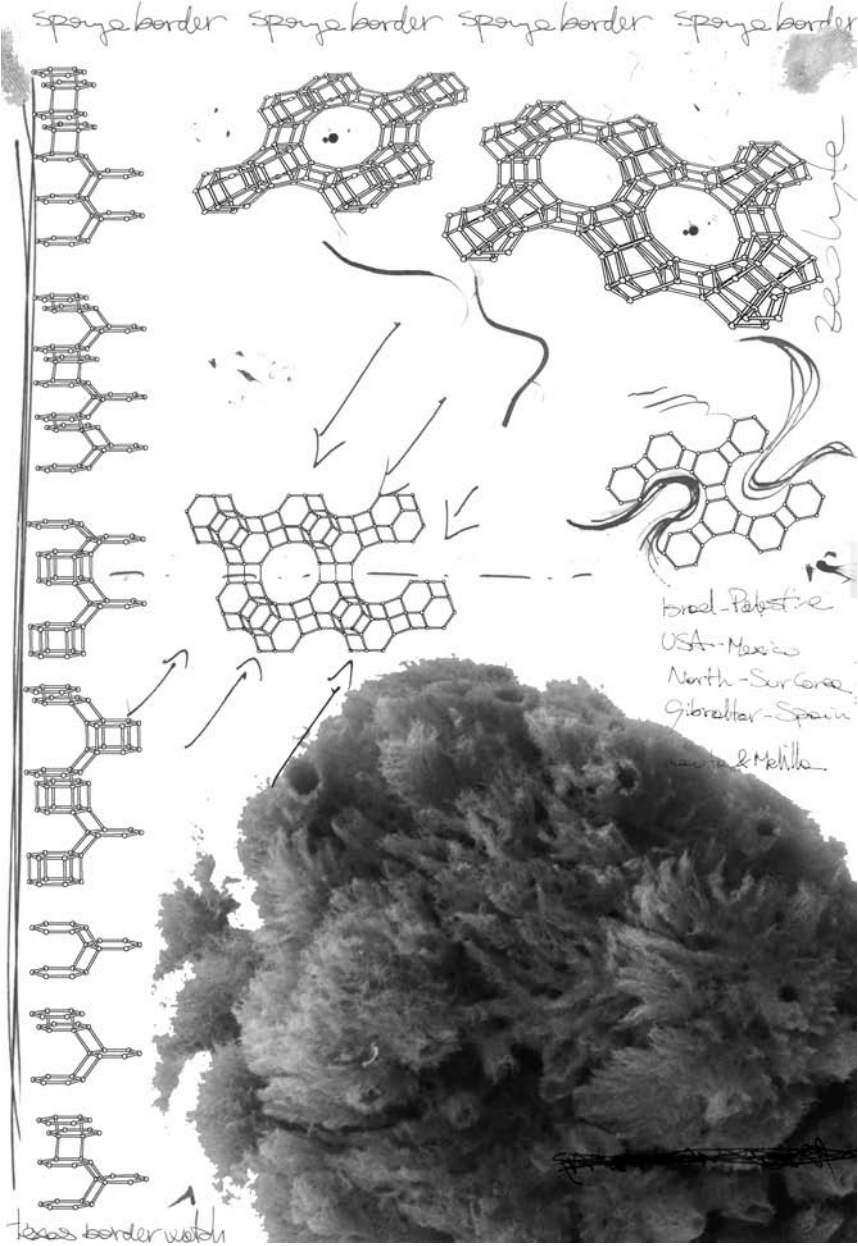
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Borders, as we know them today, have historically been created mostly in times of war,<sup>1</sup> and sustained as a useful mechanism in case of a possible invasion. Only with the arrival of globalisation, which we can say coincided with the dismantling of the Berlin Wall in 1989,<sup>2</sup> and with the development of different supranational entities invested in controlling world trade, have borders acquired another strategic function – the control of different flows, especially the economic and the migratory.

If we think about the different flows generated around borders, we will see that the physical elements of a frontier are not really that significant, other than in those problematic cases that relate to migration.<sup>3</sup>

In the great majority of these cases, walls of concrete (Berlin, Palestine) or ‘simple’ double or triple fences (for instance, the enclaves of Ceuta and Mellila in Spain, and the US-Mexico border that spans several American states) create frontiers where the authorities dedicated to their control try to eradicate any feeling of belonging, thus turning these zones into wastelands. In this context it is interesting to mention the notably successful month-long experiment<sup>4</sup> ‘Texas Border Watch’. It allowed internet users to participate in the control of a section of the border through setting up a surveillance mechanism whereby vigilant American locals could inform authorities if any transgression of the border was sighted. Such projects usually generate among citizens the feeling of being fortunate, entitled and patriotic.

To recover Heidegger’s observation: dividing elements do not define where a thing ends, but indicate the condition that furthers the thing’s presence.<sup>5</sup> Take into account some phenomena that can be considered relatively positive, such as the *maquiladoras* (transnational assembly plants) in the border city of Tijuana<sup>6</sup> (the second-highest source of revenue after oil for the Mexican economy). And the recent creation of two inter-Korea railway connections (Munsan to Kaesong and Jejin to Kumgang), strengthening the potential of Kaesong’s Special Economic Zone where hundreds of South Korean companies have located their plants.



We want to propose borders as porous systems, three-dimensional and technological, configured as bridges between different, and perhaps historically estranged, shores. Such borders are antennae that not only attract and catch the signals of the realities on both sides, but also transmit, all around, the cultures and traditions of those who live there.

We want to return to the old concept of the great bazaar, a place where persons from both sides of the border can meet, generating a new place of cultural and economic interchange...

We think about the utilisation of zeolites,<sup>7</sup> or smart sponges, as a metaphor of the functioning of these spaces: microporous solids with the aptitude to store selectively and then to return heat, water, gas... or even people and their dreams...

## Notes

1. D. Van der Velden, T. Clausmeyer, V. Kruk and A. Mellegers. "The Discovery of the Fifth World". In *Sarai Reader 05: Bare Acts* (CSDS, 2005, Delhi), pp. 96-110.
2. Joaquín Estefanía. "La era de la globalización". In *El País*, sec. Negocios, pp. 8-9.
3. G. Cimadomo and P. Martínez Ponce. "Ceuta and Melilla Fences: A Defensive System?" In *Sarai Reader 06: Turbulence* (CSDS, 2006, Delhi), pp. 336-41.
4. "The Texas Border Watch Test Site Is Now Closed". See <http://www.texasborderwatch.com/>. Accessed 14 May 2007. See also an official statement by Texas governor Rick Perry declaring that with "voluntary participation" of private landowners, "Texas will use \$5 million to begin placing hundreds of surveillance cameras along criminal hotspots and common routes used to enter this country". The cameras will cover vast stretches of farm and rangeland located directly on the border where "criminal activity" is known to occur, and "not the neighborhoods where families will continue to enjoy their privacy... We will make the video feed available to state, local and federal law enforcement agencies so they can respond swiftly and appropriately... The video will be available 24 hours a day and cameras will be equipped with night vision capabilities". See <http://www.governor.state.tx.us/divisions/press/pressreleases/PressRelease.2006-06-01.1612>.
5. In *Poetry, Language, Thought* (trans. Albert Hofstadter; Harper & Row, 1971, New York), Heidegger invokes a concept of "difference" while commenting on the poem *Ein Winterabend* (A Winter Evening) by the Austrian poet Georg Trakl:

"For world and things do not subsist alongside one another. They penetrate each other. Thus the two traverse a middle. In it, they are at one. Thus at one, they are intimate. The middle of the two is intimacy – in Latin, *inter*. The corresponding German word is *unter*, the English *inter*. The intimacy of world and thing is not a fusion. Intimacy obtains only where the intimate – world and thing – divides itself cleanly and remains separated. In the midst of the two... in their *inter*, division prevails – a difference (*unterschied*). According to Heidegger, this differentiation "is unique"; "of itself, it holds apart the middle in and through which world and things are at one with each other... Whatever goes out and goes in... is found in the

between's dependability... The dependability of the middle must never yield either way... The settling of the between needs something that can endure..." Heidegger concludes, "When the difference gathers world and things into the simple one fold of the pain of intimacy, it bids the two to come into their very nature" (pp. 202, 204, 207).

6. See Sergio De La Torre, "*Paisajes*", in *Sarai Reader 06: Turbulence*, op. cit., pp. 333-35. "*Maquiladoras* assemble filters, batteries, cassettes, flybacks and other electronic parts, Yugo automobiles, oxygen masks, clothes, toys, keyboards, household implements, etc. The first *maquiladoras* were built in the 1960s on the outskirts of Tijuana. This was initially an industrial zone, but today it is also residential, since Tijuana expands at the rate of two acres per day..."
7. Emanuele Ricci. "Zeolites (Smart Sponges)". In *Domus*, No. 898, p. 134 (December 2006). Zeolites (from the Greek *zein*, 'to boil', and *lithos*, 'stone') are the aluminosilicate members of the family of microporous solids known as 'molecular sieves'. These have the ability to selectively sort molecules based primarily on a size exclusion process. The framework structure of tetrahedra, ordered in beautiful formations, may contain linked cages, cavities and chambers of the right size to allow small molecules to enter. The maximum size of the molecules or ionic species that can enter the pores of a zeolite is controlled by the diameters of the tunnels. Chemical species with a kinetic diameter that makes them too large to pass through a zeolite pore are effectively 'sieved'.

Adsorption based on molecular sieving is usually reversible in practice. This allows the zeolite, which can separate molecules based on size, shape, polarity and degree of unsaturation, to be used many times.

Naturally occurring zeolites, formed where volcanic rocks and ash layers react with alkaline groundwater, are rarely pure and are contaminated to various degrees by other minerals, metals, quartz or other zeolites. The combination of many properties – including the uniform pore dimensions, the ion exchange capacities, the ability to develop internal acidity, the high thermal stability, the high internal surface area – make zeolites unique among inorganic oxides.