



**Unas notas sobre Bateson, Stengers & Guattari  
& una nota final sobre Antropoceno, Capitaloceno & Chthuluceno según Haraway**

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## **Contenidos**

Bateson: mente: unidad de supervivencia-evolución, ecología de la mente...

Stengers: ecología de las prácticas

Guattari: las tres ecologías

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Un comentario sobre la propuesta del *Chthuluceno* de Donna Haraway

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Referencias

## **Gregory Bateson**

[1904-1980: antropología/etnografía... psicología, cibernetica, ecología...]

*Bateson vs Shannon ¿?*

Definición de trabajo: otra manera de mirar: propone que la mente [& los ecosistemas] no serían tanto suma de cosas aisladas, autónomas, que interactúan sin ser afectadas o cambiar en su ser, como procesos de los que participan las cosas y que las constituyen, que constituyen sus //esencias// – atención al gerundio.

Teoría del devenir: *Los hombres son hierba...*

Esta interacción se produce en virtud de la forma, del orden, de la organización... ¿el modelo bioquímico o el modelo de los metabolismos?

**Así como existe una ecología de las malas hierbas**

**Existe una ecología de las malas ideas.**

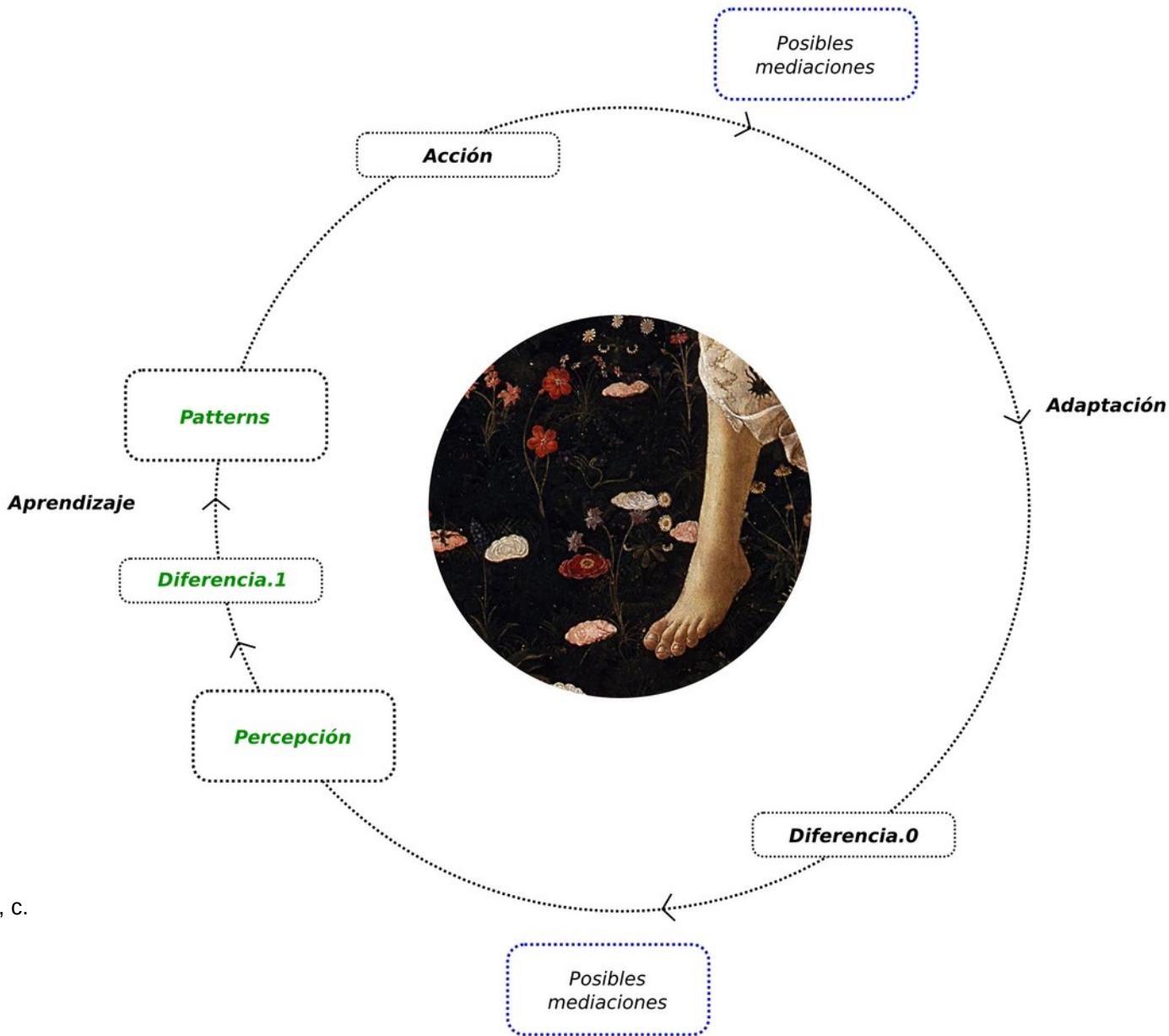


Imagen: Fragmento de la  
*Primavera* de S. Botticelli, c.  
1480. Fuente: Wikipedia

Gregory Bateson, c. 1970, *Form, substance, difference*

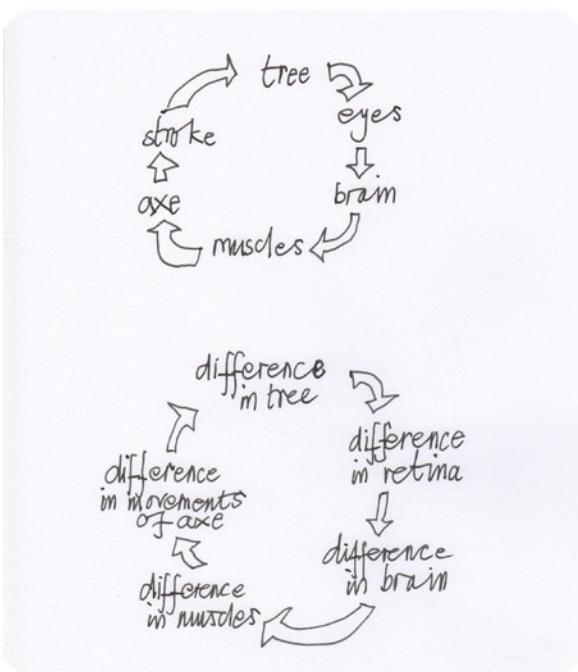
Dos tradiciones filosóficas:

**Preguntas de qué está hecho – tierra, fuego, agua, etc. – (la pregunta por la sustancia).**

**O preguntas cuál es el patrón (*pattern*) (la pregunta por la forma, organización, número... ¿mente?)**

– pitagóricos, gnósticos, alquimistas... :-O

<https://arquitecturacontable.wordpress.com/2018/01/01/forma-sustancia-y-diferencia-gregory-bateson/>

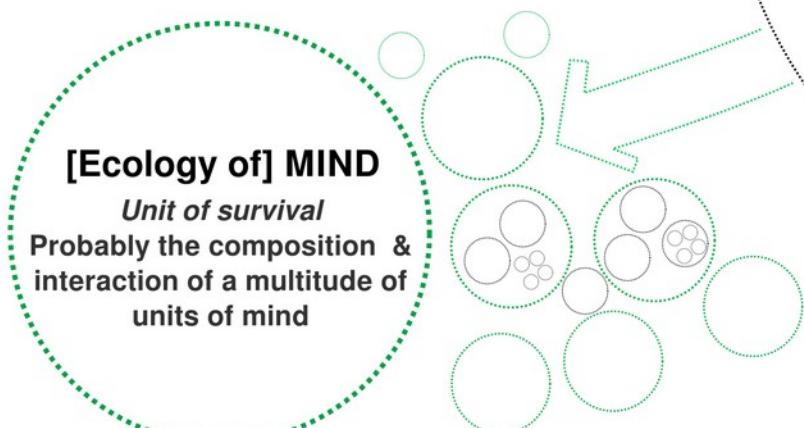


### Perception: Difference0

efferent messages  
sensing extensions/pathways

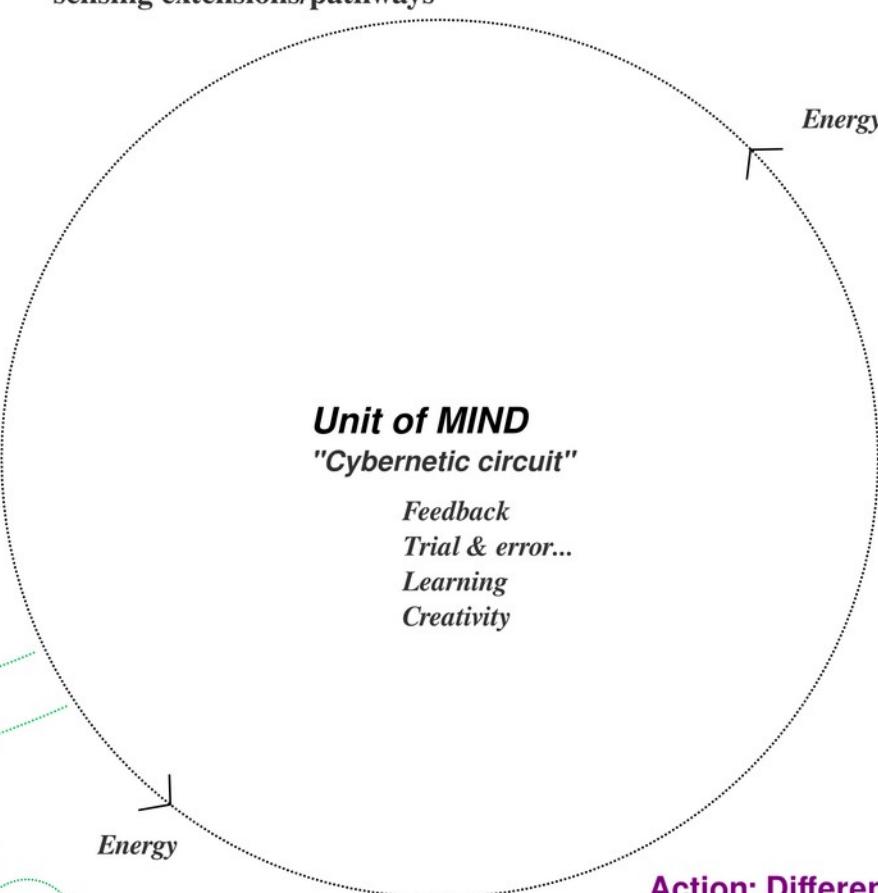
Flow/feedback of differences \_ "cybernetic circuit"

### Form/agent: Pattern



### Unit of MIND "Cybernetic circuit"

Feedback  
Trial & error...  
Learning  
Creativity



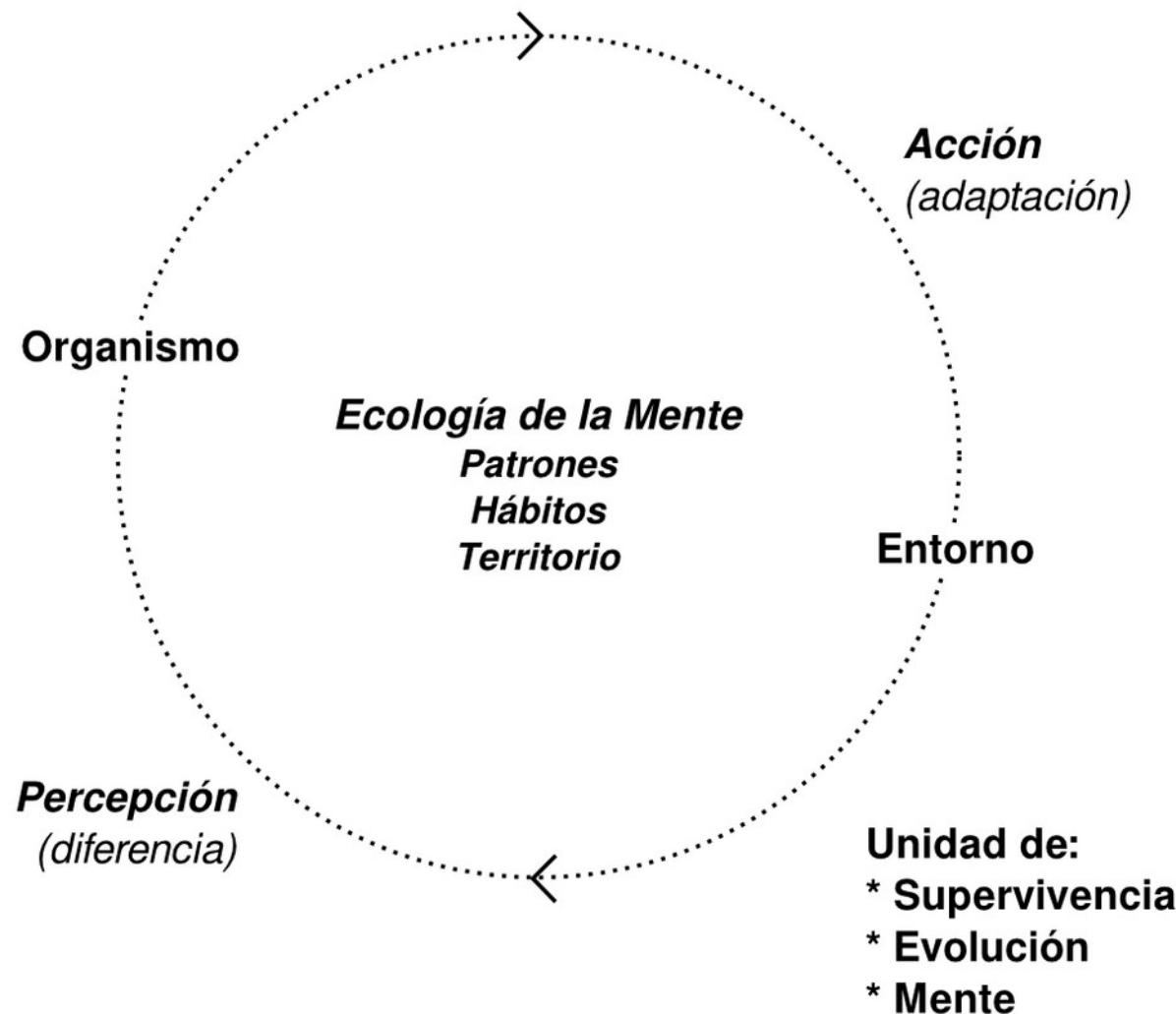


Figura 2: Circuito cibernetico, unidad de mente y de evolución, según Gregory Bateson, 1972. "Nos iría mejor si considerásemos como unidad de supervivencia al organismo + su entorno." Pérez de Lama, 2019.

Question, problem:

**Form, organization,  
organism plus environment... mind**

#### References

- (1) very abstract and formal philosophic thought on the one hand and
- (2) the natural history of man and other creatures on the other.

#### Substance and form

Philosophic tradition... "Do you ask what it's made of - earth, fire, water, etc." (substance). Or do you ask, "What is the pattern?" (form, organization, number - mind; Pythagoreans, Gnostics, alchemists...)

#### Unit of survival (of evolution)

Flexible organism or aggregate of organisms plus flexible environment

#### Unit of mind

Map / territory -> difference -> elementary unit of information  
-> difference traveling in a circuit: elementary idea

Pleroma & creatura; creatura: world seen as mind:  
difference, form, pattern (negentropy)... information/mind

Difference: classes, levels; system and subsystems

#### Mind; cybernetic circuit

Synonymous with cybernetic system – the relevant total information-processing, trial-and-error completing unit (circuit)

Mind and phenomenon: blind man; contingent; paths; unconscious, conscious, external

#### Unit of evolution = Unit of mind

Information or entropy ecology (ecology of mind)

Global imminent mind  
total interconnected social system and planetary ecology

Concept of self: subsystem; connectedness

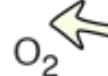
Art: bridges between levels

Gregory Bateson, 1970, Form, Substance, and Difference,  
en: G.B., 2000, Steps to an Ecology of Mind (StaEoM), University of Chicago, Chicago, pp. 454-471  
Diagram: J. Pérez de Lama, 2015

Energy from the Sun is taken up by the plants, which absorb that energy in their chloroplasts.

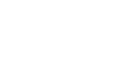


Oxygen



Energy used in chloroplasts to create ordered, energy-rich sugar molecules.

Sugars

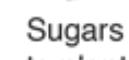


Water



Oxygen

Sugars available to plants to use for their own purposes.



CO<sub>2</sub>

Sugars also available to the animals for food.

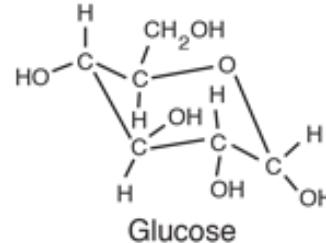


Water

Plants can reuse these products with the input of energy from the Sun.



In the process, they convert the highly ordered sugars into carbon dioxide and water, a disorganized form.

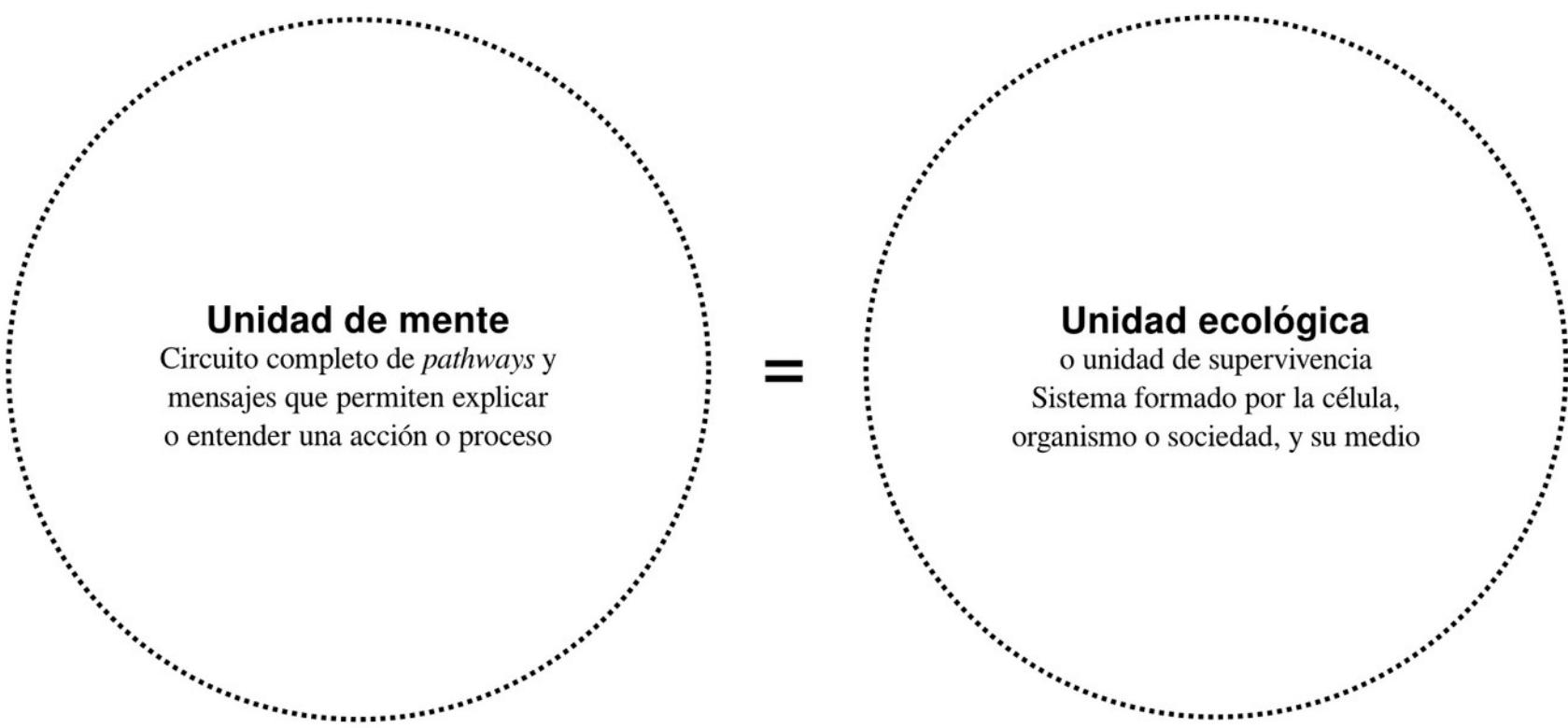


Animals use the sugars to produce their own "energy currency" through the mitochondria

ATP

The energy source for animal life processes.

## Ciclo energía-materia-diferentes formas de vida



Identidad de unidad de mente y unidad de supervivencia (ecológica, evolutiva)

Gregory Bateson, 1970, *Form, Substance, and Difference*

Diagrama: J. Pérez de Lama, 2018

Proposiciones relacionadas:

**Hacemos nuestros edificios y luego nuestros edificios nos hace a nosotros.** ~ W. Churchill.

Esta es una referencia frecuente que puede verse atribuida a W. Churchill, por ejemplo en Stewart Brand, 1994, p. 3. La cita en inglés, hecha en 1924 en la Architetcural Association de Londres, según la refiere Brand es así: We make our buildings and afterwards they make us. They regulate the course of our lives.

**Damos forma a nuestras herramientas y luego nuestras herramientas nos dan forma a nosotros.**

Atribuido a Marshall McLuhan y John Culkin (1967): *We become what we behold. We shape our tools and then our tools shape us* – que podría quizás traducirse como: Nos convertimos en lo que experimentamos...

<https://mcluhangalaxy.wordpress.com/2013/04/01/we-shape-our-tools-and-thereafter-our-tools-shape-us/> visitado  
28/04/2021

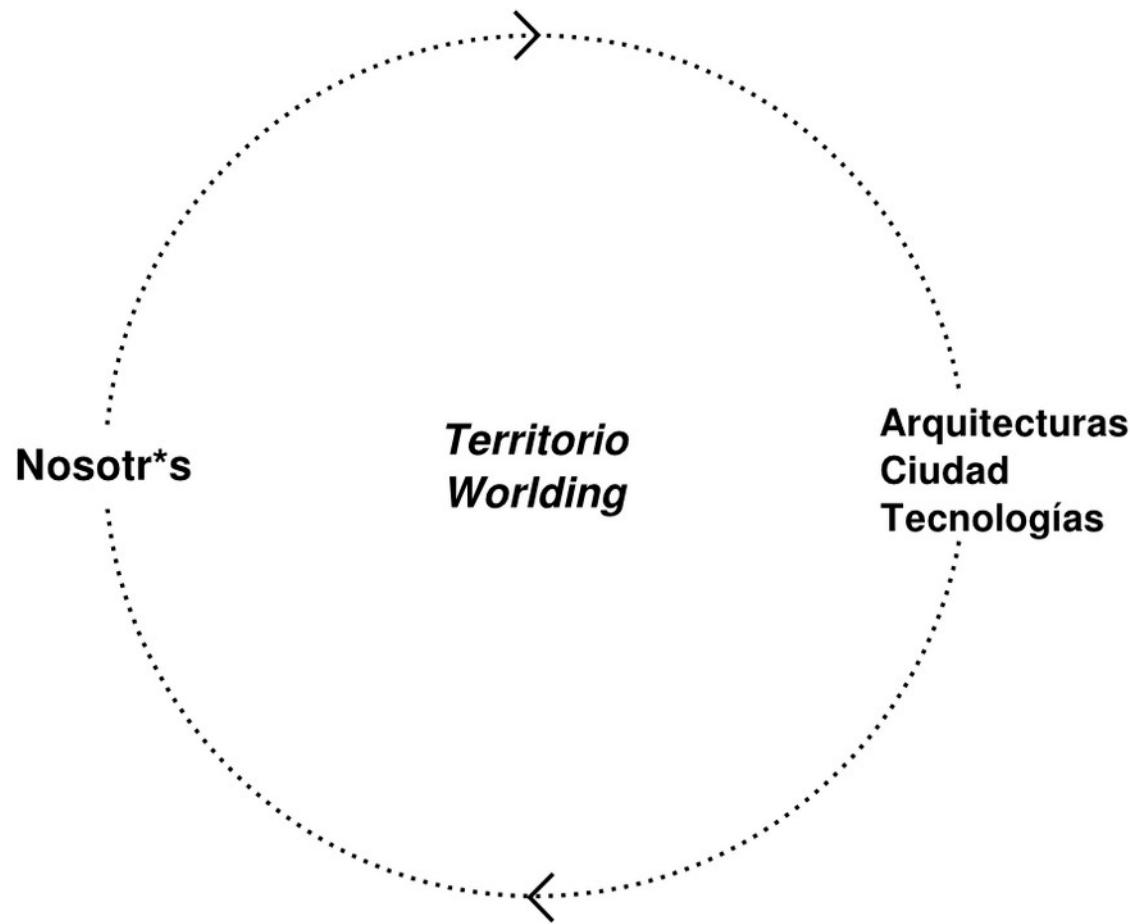


Figura 1: "Hacemos la ciudad y la ciudad nos hace a nosotros, en un proceso permanentemente recursivo" \_  
William Mitchell, 2003; W. Churchill, S. Brand... Pérez de Lama, 2019

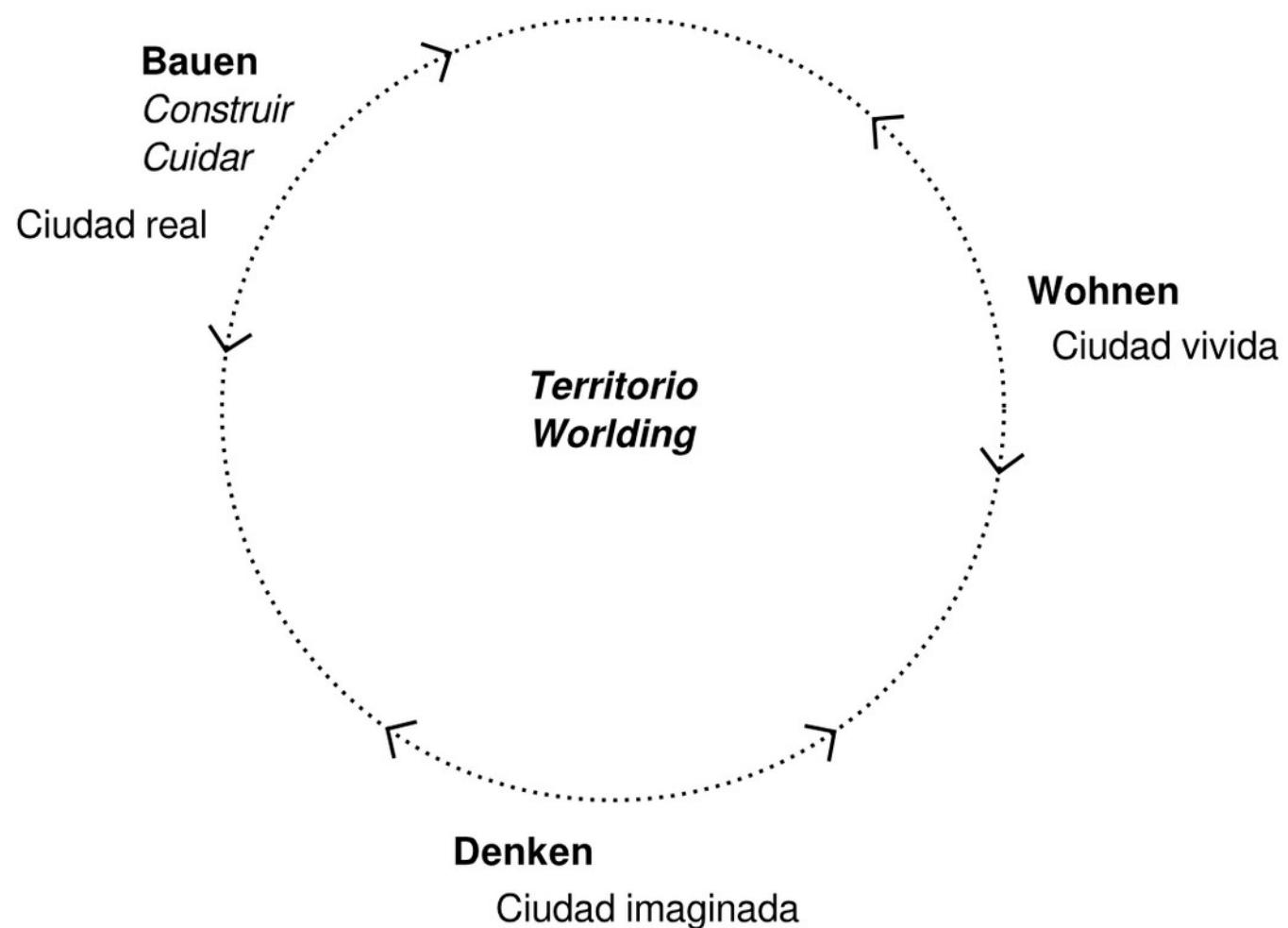


Figura 3: Tríada *construir, pensar, habitar* propuesta por Heidegger, 1951 & tríada de la producción social del espacio según Henri Lefebvre y Edward Soja, *Thirdspace*, 1996. Pérez de Lama, 2019.

**[...] the proposition that tools are prolongations of human organs can be inverted to state that the organs are also prolongations of the tools.**

Max Horkheimer, 1937, «Traditional and Critical Theory» [in MH, 1982 [1972], *Critical Theory. Selected Essays*, Continuum, Nueva York, p. 201

So I am not *Vitruvian man*, enclosed within a single perfect circle, looking out at the world from my personal perspective coordinates and, simultaneously, providing the measure of all things.

Nor am I, as architectural phenomenologists would have it, an autonomous, self-sufficient, biologically embodied subject encountering, objectifying, and responding to my immediate environment.

I construct and I am constructed, in a mutually recursive process that continually engages my fluid, permeable boundaries and my endlessly ramifying networks. I am a *spatially extended cyborg*.

William J. Mitchell, 2003, Me++. The Cyborg Self and the Networked City, pp.  
39

As Bateson had began to realize, we are not fully contained within our skins; our extended networks and fragmented habitats make us spatially and temporally indefinite entities. His central insight was that the *ancient* distinctions between user and tool, building and inhabitant, or city and citizen, no longer serve us well.

And at a practical design level, his point becomes ever more urgent as carbon/silicon interfaces get tighter, as networked silicon intelligence embeds itself everywhere, as networked systems of embedded computers replace stand-alone boxes of electronics, as different types of networks are integrated into multi-functional systems, and as computer and cognitive scientists increasingly theorize “societies of mind” rather than discrete, unified intelligences.

We will do better to take the unit of subjectivity, and of survival, to be the biological individual *plus* its extensions and interconnections.

William J. Mitchell, 2003, Me++. The Cyborg Self and the Networked City, pp. 38-39

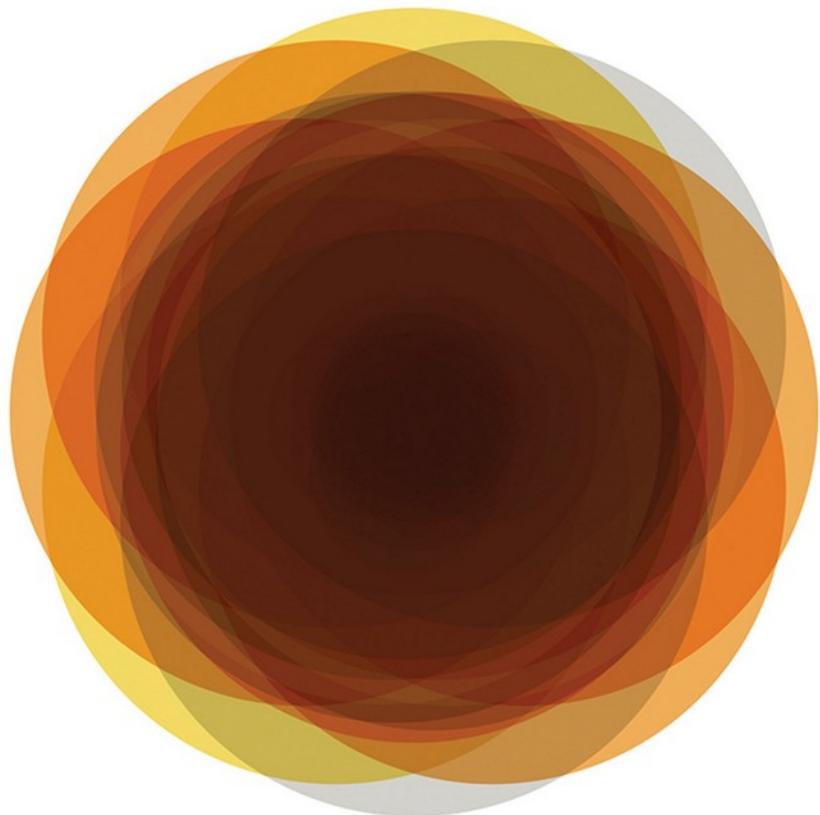
We are all cyborgs now. To the point where this reality no longer appears at all striking. As so perfectly pictured in Alex Rivera's film *Sleepdealer* (2008), we are biological machines strapped to information machines which together function as war machines.

It is remarkable how much of our cyborg existence Donna Haraway anticipated.

McKenzie Wark, 2015, Blogpost for Cyborgs. On Donna Haraway  
<https://publicseminar.org/2015/09/blog-post-for-cyborgs/> | accedido  
28/04/2021



# Cosmopolitics I



1. The Science Wars
2. The Invention of Mechanics
3. Thermodynamics



Isabelle Stengers, c. 2014, fuente: <https://youtu.be/1I0ipr61SI8>

**ISABELLE STENGERS**

TRANSLATED BY ROBERT BONONNO

## **«Ecología de las prácticas», un concepto de Isabelle Stengers [*Cosmopolítics*, 1997 (2003)]**

Esta idea de Stengers la propuso -- originalmente -- en un debate sobre las ciencias de los años 90. Al virulento se le dio el nombre de las *Science Wars*: la cuestión que se planteaba era la de la unidad ideal del conocimiento humano, habitualmente vinculado a la presunta superioridad de unas ciencias sobre otras – en concreto las físico-matemáticas sobre las demás y más particularmente las humanas. Su propuesta era contraria a la de esa pretendida unidad (y superioridad).

Lo que planteaba en su lugar era la alternativa de una «ecología de las prácticas», en las que las diferentes prácticas, cada una de ellas creadora de mundos diferentes, convivirían en relaciones comparables a las de las especies que comparten un determinado ecosistema. Conviene reseñar no obstante la manera en que Stengers nos proponía entender las relaciones ecológicas:

«La ecología no es una ciencia de funciones. Las poblaciones cuyos modos de coexistencia interrelacionada son descritos por la ecología no están completamente definidas por los roles respectivos que desempeñan en estas redes, de tal manera que pudiéramos deducir la identidad de cada una sobre la base de su rol. Este rol es por definición metaestable, esto es, que no está garantizado frente a posibles inestabilidades. Es un producto de bricolaje, sobre el que todo lo que podemos decir es que funciona más o menos, – y no de un cálculo cuya economía y lógica tuviera que ser revelada».

[...] subrayar la cuestión de las prácticas, – en contraste con las ideas: ecologías de la mente / ecologías de las prácticas -, como materializadoras de mundos concretos:

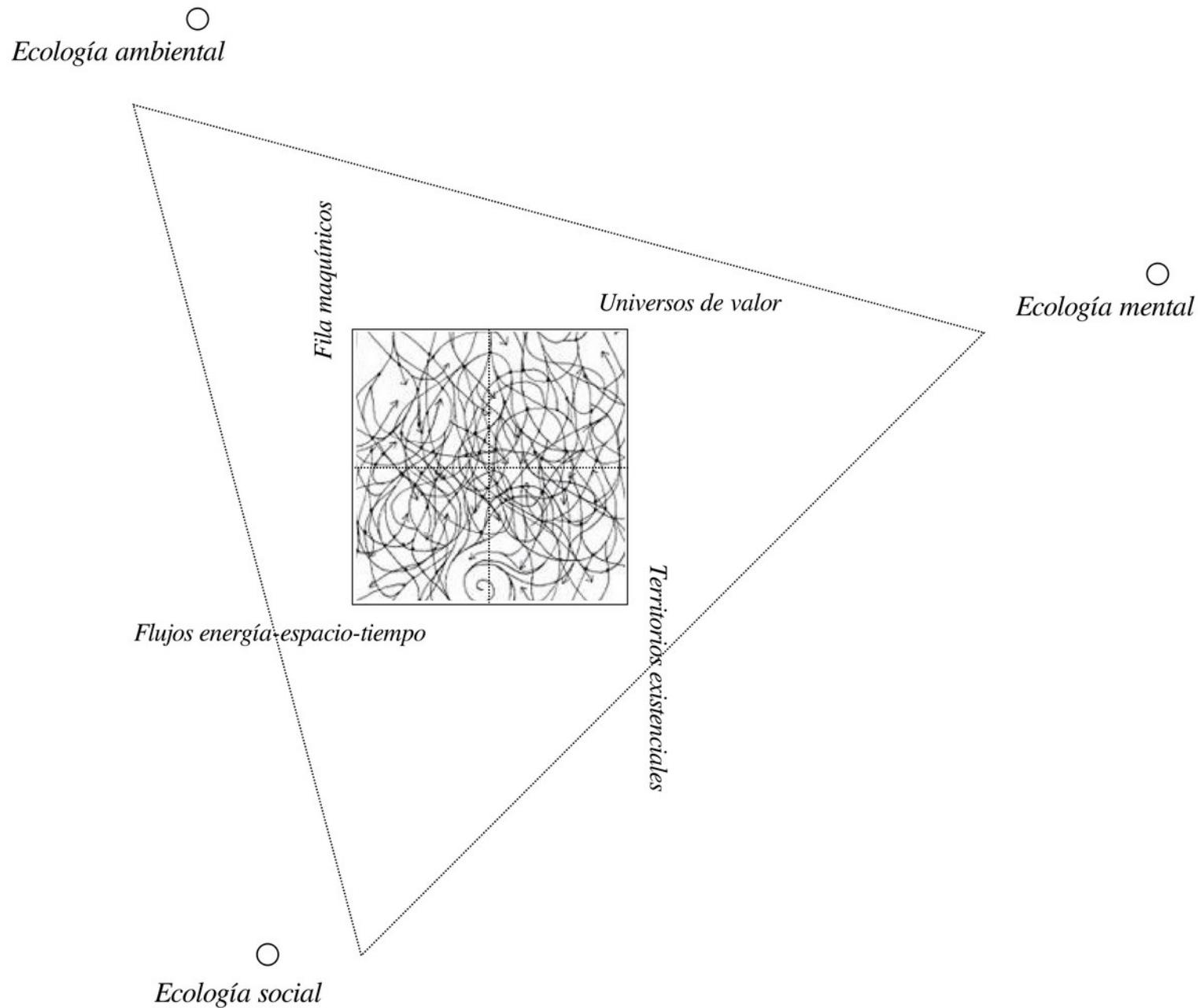
«[E]l tema de una ecología de las ideas tiene el defecto de confundir a los actores con seres que son autosuficientes, a quienes el mundo no expone a riesgos. Esto es por lo que culmina, bastante convencionalmente, en la expectativa de la *conversión* [...]»

La ecología de las prácticas por su parte, tiene que afirmar aquello que diferencia práctica e idea: las prácticas no pueden, como no puede hacerlo ningún ser vivo, dirigirse a un mundo en silencio, el dócil sustrato de las convicciones y las interpretaciones; su modo de existencia es relacional y condicionado [*constrained*], no alucinado y visionario; su materialización no se refiere a una autoridad general de la que [las prácticas] serían una traducción local, sino a un aquí y ahora que fabrican las prácticas mismas y que [a su vez] las hace posibles.” [2003: 40]



Isabelle Stengers & Félix Guattari  
Fuentes:

<https://konspektikaust.wordpress.com/2012/10/04/isabelle-stengers-including-nonhumans-in-political-theory/>  
<https://denniscooperblog.com/spotlight-on-felix-guattari-the-machinic-unconscious-1979/>



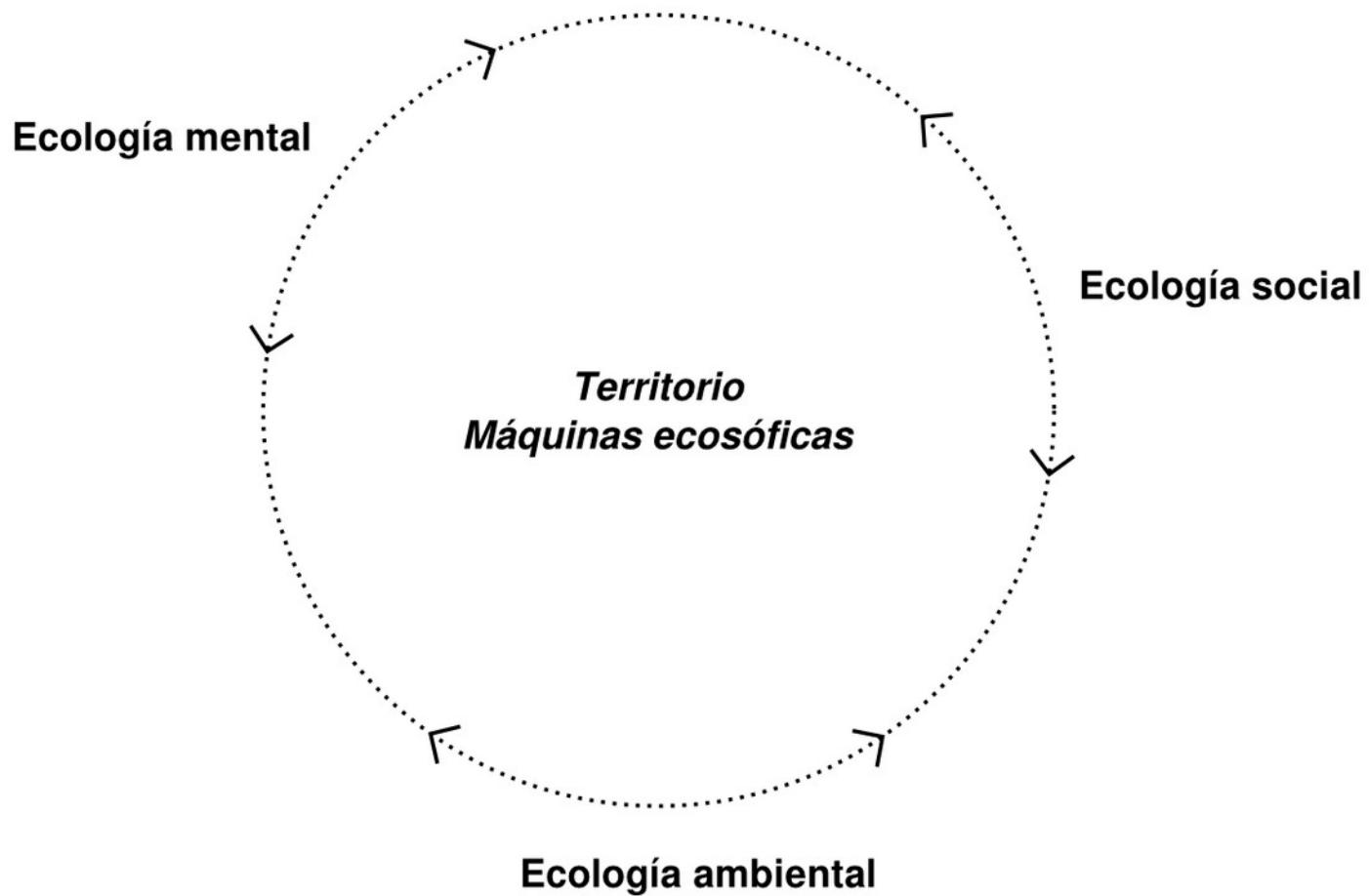


Figura 4: Las tres ecologías; ecosofía; Félix Guattari, 1989 [1996]. Pérez de Lama, 2019.

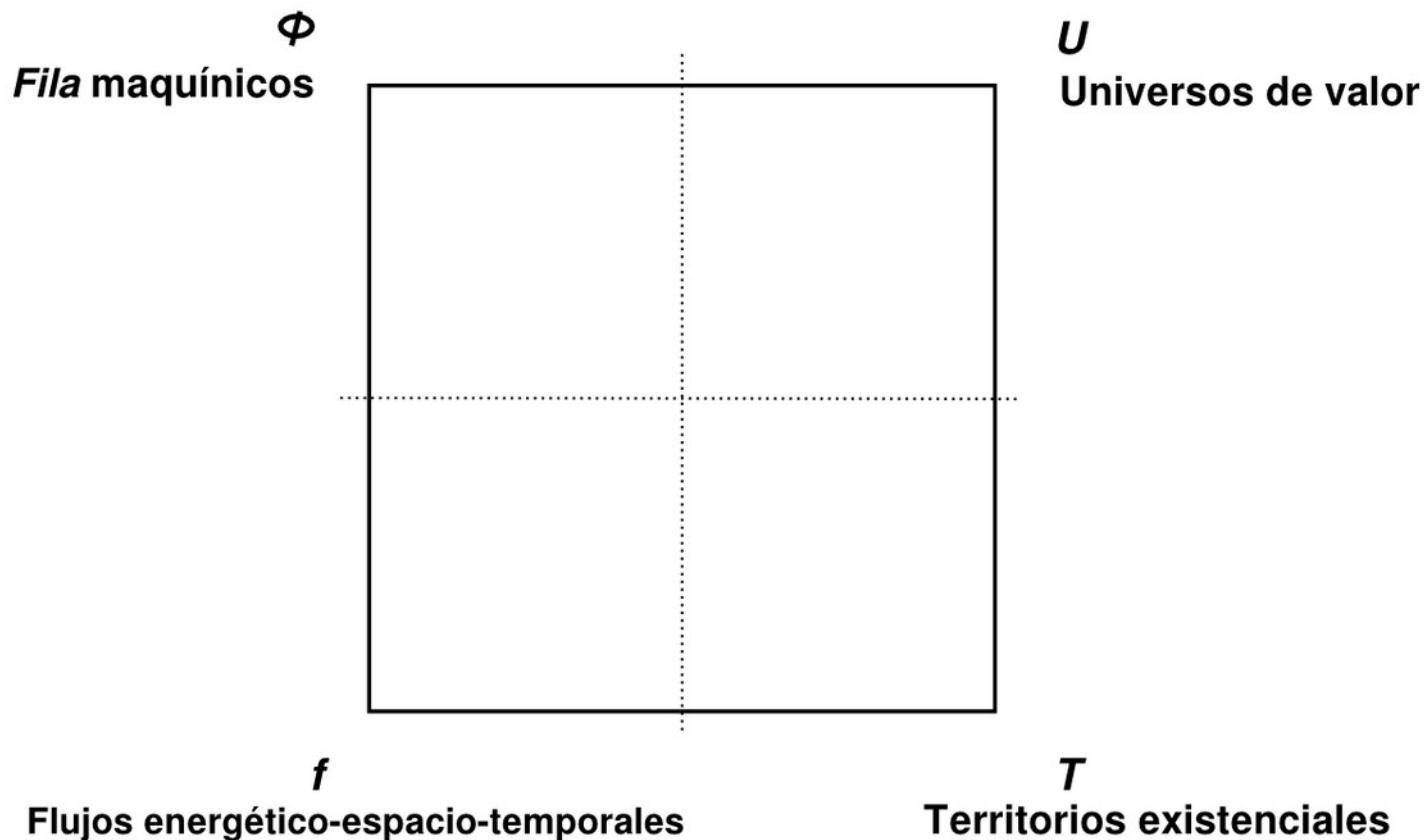
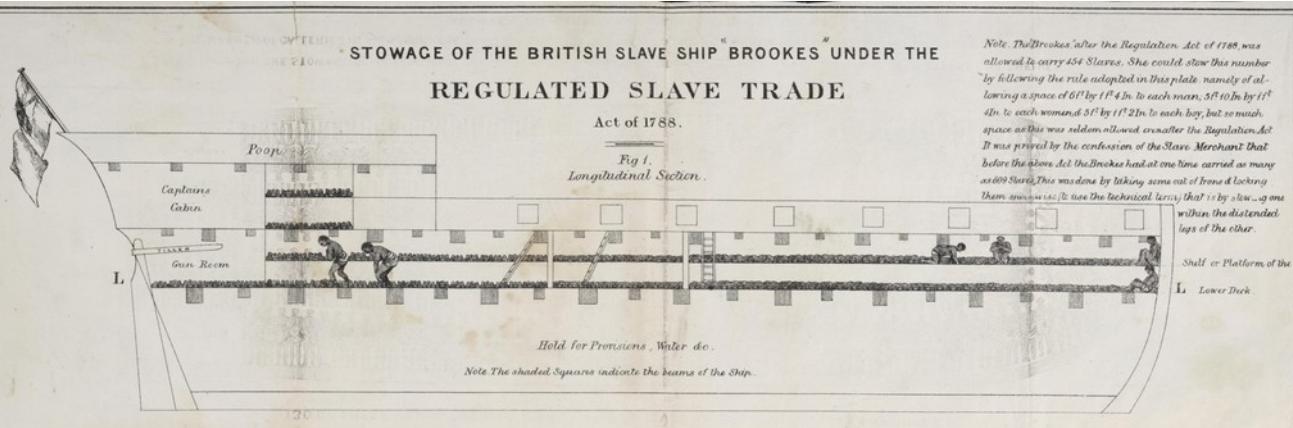


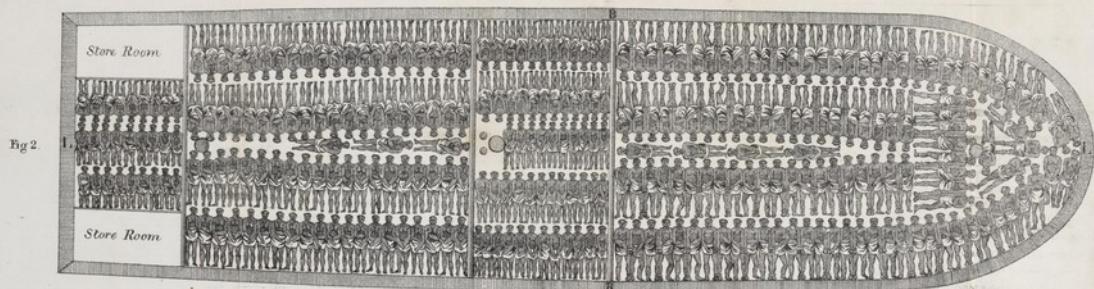
Figura 5: Cartografía esquizoanalítica como dispositivo para la producción de otros territorios, Félix Guattari,  
*Chaosmosis*, 1995 / Pérez de Lama, 2011.

**Igual que hay una ecología de las malas hierbas  
Hay una ecología de las malas ideas... [Bateson / Guattari]  
(Y habrá una ecología de las malas prácticas...)**

**Un paradigma ético-estético [Guattari]  
Un paradigma eco-ético-estético... podíamos tal vez decir...**



PLAN OF LOWER DECK WITH THE STOWAGE OF 292 SLAVES  
130 OF THESE BEING STOWED UNDER THE SHELVES AS SHEWN IN FIGURE D & FIGURE 5.



PLAN SHEWING THE STOWAGE OF 130 ADDITIONAL SLAVES ROUND THE WINGS OR SIDES OF THE LOWER DECK BY MEANS OF PLATFORMS OR SHELVES (IN THE MANNER OF GALLERIES IN A CHURCH) THE SLAVES STOWED ON THE SHELVES AND BELOW THEM HAVE ONLY A HEIGHT OF 2 FEET 7 INCHES BETWEEN THE BEAMS: AND FAR LESS UNDER THE BEAMS. See Fig 1.

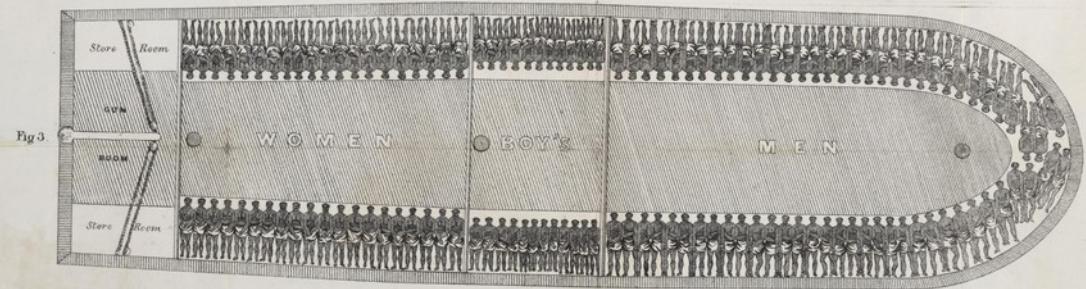


Fig 4.  
Cross Section  
at the Poop.

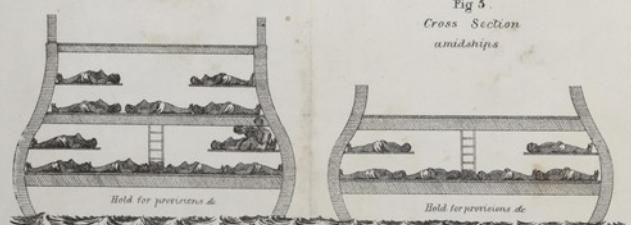


Fig 5.  
Cross Section  
amidships

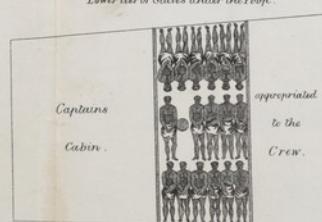


Fig 7.

Lower tier of Slaves under the Poop.

Shelf tier of Slaves under the Poop.

Captains Cabin.

appropriated  
to the Crew.

Captains Cabin.

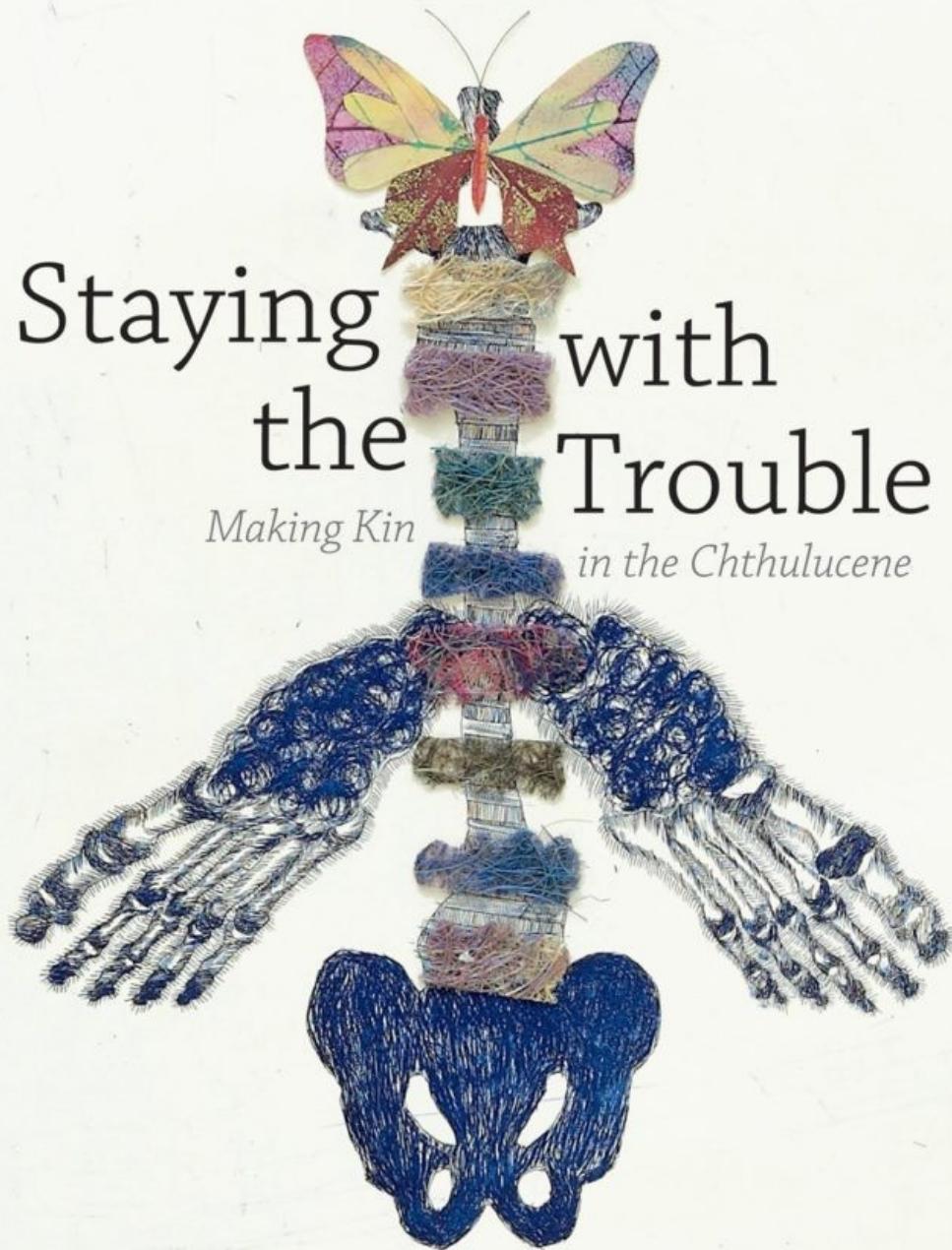
appropriated  
to the Crew.

## Interferencia

¿Qué tipo de ecologías social, mental y ambiental podemos decir que habría aquí?

De otra posible clase sobre espacios necropolíticos... (según Achille Mbembe, 2003)





DONNA J. HARAWAY

**Donna Haraway**  
**Staying with the Trouble.**  
**Making Kin in the Chthulucene**  
**2016**



Donna Haraway, captura dek vídeo *Story Telling for Earthly Survival*, 2017

**Donna Haraway**  
**Staying with the Trouble.**  
**Making Kin in the Chthulucene**  
**2016**

Cinco o seis ideas...

Anthropocene, Capitalocene ... Chthulucene

Chthulucene: ni rendirse por saber demasiado; ni confiar en el milagro tecnológico

Chthulucene: dejar de mirar al cielo y mirar a la tierra: lo concreto, las prácticas cotidianas; *without hope and without despair*

Chthulucene: making odd-kin; ¿a quién tenemos en cuenta? ¿cuáles son los aliados? Otros vivos, no humanos, máquinas... Cyborg reload?

Chthulucene: ciencia (ficción), arte & activismo

Matters of fact, matters of concern, matters of care (Latour, Puig de la Bellacasa)

## **SwtMKitCh | Section 1: Trouble, staying with the trouble**

Versión en Esp:

[https://www.consonni.org/sites/default/files/Seguir%20con%20el%20problema\\_Haraway\\_capi1.pdf](https://www.consonni.org/sites/default/files/Seguir%20con%20el%20problema_Haraway_capi1.pdf)

En inglés aquí, con mis comentarios:

<https://arquitecturacontable.wordpress.com/2020/09/15/donna-haraway-staying-with-the-trouble-analisis-de-la-introduccion/>

Trouble is an interesting word. It derives from a thirteenth-century French verb meaning “to stir up,” “to make cloudy,” “to disturb.”

We – all of us on Terra – live in disturbing times, mixed-up times, troubling and turbid times.

The task is to become capable, with each other in all of our bumptious kinds, of response.

Mixed-up times are overflowing with both pain and joy [?] – with vastly unjust patterns of pain and joy, with unnecessary killing of ongoingness but also with necessary resurgence.

The task is to make kin in lines of inventive connection as a practice of learning to live and die well with each other in a thick present.

## \_\_ The future question

In urgent times, many of us are tempted to address trouble in terms of making and imagined future safe, of stopping something from happening that looms in the future, of clearing away the present and the past in order to make futures for coming generations. (#)

Staying with the trouble does not require such a relationship to times called future.

In fact, staying with the trouble requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configurations of places, times, matters, meanings.

## Section 2: Chthulucene

Chthulucene is a simple word. It is a compound of two Greek roots (*khthón* and *kainos*) that together name a kind of timeplace for learning to stay with the trouble of living and dying in response-ability on a damaged earth.

Kainos means now, a time of beginnings, a time for ongoing, for freshness.

Nothing in kainos must mean conventional pasts, presents or futures.

There is nothing in times of beginning that insists on wiping out what has come before, or, indeed, wiping out what comes after, kainos can be full of inheritances, or remembering, and full of comings, of nurturing what might still be. I hear kainos in the sense of thick, ongoing presence, with hyphae (\*) infusing all sorts of temporalities and materialities.

### Section 3: Chthonic ones

//Significantly contributes to the understanding of the Chthulucene.

Chthonic ones are beings of the earth, both ancient and up-to-the-minute. I imagine chthonic ones as replete of tentacles, feelers, digits, cords, whiptails, spider legs, and very unruly hair.

Chthonic ones romp in multicritter humus but have no truck with sky-gazing Homo.

Chthonic ones are monsters in the best sense; they demonstrate and perform the material meaningfulness of earth processes and critters. They also demonstrate and perform consequences.

Chthonic ones are not safe; they have no truck with ideologues; they belong to no one; they writhe and luxuriate (\*) in manyfold forms and manyfold names in all the airs, waters, and places on earth.

They make and unmake, they are made and unmade.

Our task is to make trouble, to stir up potent response to devastating events, as well as to settle troubled waters and rebuild quiet places.

They are who are. [!]

No wonder the world's great monotheisms in both religious and secular guises have tried again and again to exterminate the chthonic ones. [\*\*]

The scandals of times called the Anthropocene and the Capitalocene are the latest and most dangerous of these extinctions forces. (#)

Living-with and dying-with each other potently [##] in the Chthulucene can be a fierce reply to the dictates of both Anthropos and Capital. (&)

## Section 4: Making kin

[parentesco, también: i am very keen on; original tiene que ver con clan y con relación de sangre; se extiende a relacionado, compatible... afín]

Kin is a wild category that all sorts of people do their best to domesticate. Making kin as oddkin (\*) rather than, or at least in addition to, godkin (\*\*) and genealogical and biogenetic family troubles important matters, like

- \_ to whom one is actually responsible.
- \_ Who lives and who dies,
- \_ and how, in this kinship rather than that one?
- \_ What shape is this kinship,
- \_ where and whom do its lines connect and disconnect,
- \_ and so what?

What must be cut and what must be tied in multispecies if flourishing on earth, including human and other-than-human beings in kinship, are to have chances? (\*)

[...]

## Section 6: Two typical responses to the Anthropocene

The book and the idea of “staying with the trouble” are especially impatient with two responses that I hear all too frequently [responses] to the horrors of the Anthropocene and the Capitalocene (\*).

(\*) A&C were already mentioned without explanation in section 3.

[6.1] The first is easy to describe, and i think, dismiss, namely, a comic faith in technofixes (\*), whether secular or religious: technology will somehow come to the rescue of its naughty but very clever children, or what amounts to the same thing, God will come to the rescue of his disobedient but ever hopeful children.

In the face of such touching silliness about technofixes (or techno-apocalypses [?]), sometimes it is hard to remember that it remains important to embrace situated technical projects and their people. They are not the enemy; they can do many important things for staying with the trouble and for making generative oddkin.

\* Tecnosolucionismo que critica el amigo Morozov entre otros



Uno de los ejemplos que plantea DH, en que se componen artistas, científicas, activistas, otros seres vivos, ecosistemas, medios... *The Hyperbolic Crochet Coral Reef* — created by Margaret and Christine Wertheim of the Institute For Figuring, 2010; fuente img.: <https://ocean.si.edu/human-connections/books-film-arts/hyperbolic-crochet-coral-reef>

## Vídeos:

Haraway, Donna. Anthropocene, Capitalocene, Chthulucene: Staying with the Trouble. The Art of Living in a Damaged Planet. Santa Cruz, California, 2014.  
<http://vimeo.com/97663518>.

“Cuentos para la supervivencia terrenal”,  
<https://lalulula.tv/cine/100076/donna-haraway-cuentos-para-la-supervivencia-terrenal>

“Seguir con el problema” de Donna Haraway / conversación entre Donna Haraway y Helen Torres /  
subtítulos en español <https://www.youtube.com/watch?v=-WN6SYkjQSs>

## Bibliografía seleccionada \_\_\_\_\_

Gregory Bateson, 1970, *Form, Substance, and Difference*, 19<sup>a</sup> Conferencia anual en memoria de Korzybski, General Semantics Bulletin, No 37, 1970; reproducida en G.B, 2000, *Steps to an Ecology of Mind*, The University of Chicago Press, Chicago, pp. 454-471

Stewart Brand, 1994, *How Buildings Learn. What Happens after they are Built*, Penguin, Nueva York

Félix Guattari, 2000 (traducción de J. Pérez y U. Larraceleta; edición original en francés de 1989), *Las tres ecologías*, Pre-textos, Valencia

\_\_\_\_\_, 1995 (traducción Paul Baines, Julian Pefanis; edición original en francés 1992), *Chaosmosis. An ethico-aesthetic paradigm*, Indiana University Press, Bloomington-Indianapolis

Donna Haraway, 2016, *Staying with the Trouble. Making Kin in the Chthulucene*, Duke University Press, Durham

William J. Mitchell, 2003, *Me++: The Cyborg Self and the Networked City*, the MIT Press, Cambridge

J. Pérez de Lama, 2019, *Sobre Composición Arquitectónica. Pensar y hacer de otro modo: una aproximación eco-ética-estética*, en: Selina Blasco, Lila Insúa (eds.), 2019, *Exterioridades críticas. Comunidades de aprendizaje universitarias en Arte y Arquitectura y su incorporación a los relatos de la Modernidad y del presente*, Brumaria, Madrid; pp. 105-138. ISBN: 978-84-949929-8-8

Isabelle Stengers, 2003, traducción de R. Bononno [edición original en francés: 1997], *Cosmopolitics I. The Science Wars*, University of Minnesota Press, Minneapolis; disponible on line en:  
<http://blog.wbkolleg.unibe.ch/wp-content/uploads/Stengers.pdf> | accedido 19/02/2018

McKenzie Wark, 2015, Blog-post for Cyborgs. On Donna Haraway, en:  
<https://publicseminar.org/2015/09/blog-post-for-cyborgs/> | visitado 01/05/2021

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Otras referencias en las diapositivas (audivisuales, entre otros).

Blog de JPL con diversas referencias mencionadas: <https://arquitecturacontable.wordpress.com>



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