



## 5 ETCS One Week PhD-course in

# ***Cybersemiotics and Transdisciplinarity:* Applications in Linguistics, Communication, Semiotics, Culture Analysis and Biosemiotics**

Organized by Professor Søren Brier (CBS) [sb.ikk@cbs.dk](mailto:sb.ikk@cbs.dk)  
Lectures by Jesper Hoffmeyer, Fredrik Stjernfelt, Claus Emmeche,  
Torkild Thellefsen, Sara Cannizzaro.

**Time: 12-16 of August 2013**

**Place: Copenhagen Business School, Dalgas Have 15, Frederiksberg (close to the centre of Copenhagen)**

### The Main Idea of the Course

The course is first of all an explanation and exploration of the integrative transdisciplinary framework Cybersemiotics. See a short description of Cybersemiotics in **Glossarium-BITri**: <http://glossarium.bitrum.unileon.es/glossary/cybersemiotics>.

The primary curriculum is: *Cybersemiotics: Why Information is not enough* first published in 2008 at Toronto University Press and again in 2010 (find it cheapest on [www.bookfinder.com](http://www.bookfinder.com))<sup>1</sup>. You can also find it as a Google book. You are expected to have read it carefully plus the following papers by Brier and the other speakers.

We will study the integrative synthesis in Cybersemiotics and how it is carried out in two steps: The first is to accept two major and very different transdisciplinary paradigms as both being legitimate:

1. The cybernetic-informational approach leading to cognitive science's information processing paradigm and second order cybernetics, autopoiesis theory and Luhmann's system science.
2. The Peircean phaneroscopic, triadic, pragmaticistic, evolutionary, semiotic approach to meaning, leading to modern biosemiotics. Of these
  1. is based on an entropic and mathematical definition of information and self-organization in a material and informational world or in autopoietic systems, but with no concepts of first-person conscious experience and meaningful linguistic intersubjective communication;
  2. is based on a phenomenological intersubjective world of partly self-organizing triadic sign processes in an experiential embodied, meaningful world.

The second step involves following and explaining the development from first order cybernetics to second order cybernetic and autopoiesis theory from Gregory Bateson through Heinz von Foerster to Maturana and Varela, ending with Niklas Luhmann's threefold autopoietic system theory. Furthermore, embodiment theory from Lakoff and

Johnson plus Merleau-Ponty is discussed. An integration of these views with a Peircean biosemiotics is shown in a transdisciplinary philosophy of science model that will be explained and discussed. All this will be lectured on by Søren Brier during the first part of the week in interaction with the course participants. The second part of the week will bring in researchers who have contributed to the development and applications of the idea of Cybersemiotics.

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1. (2010) and in Sebeok and Danesi: *Encyclopedic Dictionary of Semiotics*, de Gruyter 2009 and under biosemiotics in *Encyclopedia of Language and Linguistics*, 2nd Ed., 2006, vol. 2, pp. 31-40, Elsevier and in Glossarium-BITri : <http://glossarium.bitrum.unileon.es/glossary/cybersemiotics> . International Encyclopedia of Systems and Cybernetics Charles Francois (Ed.)(2004), K.G. Saur, München,p.148. 7. Encyclopedia of Science, technology and Ethics, Carl Mitcham (Ed.) (2005) Thomson, Gale, New York, p. 1747

### The Objective of the Course is to:

- Enable the student to critically examine the transdisciplinary practices in doing research in the area of information, cognition and communication.
- Understand communication research as providing an account of semiotic and autopoietic organization of meaning.
- Carry through analysis of various types of theories of cognition and communication in relation to key organisational processes such as decision making, development of meaningful practises and accountability.

You are expected to be engaged in a PhD or postdoctoral project, which can be inspired by or will use aspects of transdisciplinarity and Cybersemiotics. You are expected to contribute by bringing your interpretation of and questions to the framework in order to fuel our discussions. Every student will get 20 min to talk about methodological problems in their project using a Power Point show followed by a 25 min discussion with the other students and teachers present. We are expecting a lively interdisciplinary workshop environment giving insight into the other PhD researchers' problems, finding commonalities and supplementing information about other projects and angles on the same interdisciplinary problems. We expect to get as much diversity as possible connected to this transdisciplinary field to be able to share as many perspectives as possible. Do not worry, therefore, if you have just started on your project or if you are at the end of it or you think you have a unique approach or problem. All contributions and questions are welcome.

We will do our best to recommend cheap accommodation nearby in order to make your stay in Copenhagen pleasant. Every day there will be lectures with questions, mixed with student presentations and discussion of projects. We will run from 9-17 with a lunch break and coffee breaks and a shared dinner and get together the first day.

Your written contribution: You are expected to send us a 2 page description of your project plus 2 pages describing the methodological aspects/problems of your project that you would like to discuss with your peers. All contributions will be collected into a document which will be sent to everybody for sharing in order to feed the group's methodological exchanges. It is important that you read the other participants projects in order to contribute to the discussion. These papers and your presentation and active participation in the course are necessary to get the course certificate.



## Cybersemiotics 2013: Course Program August 12-16

### Monday August 12

- 9.00-10.30: Short presentation of the course and its idea.  
Five minutes presentation about where you come from personally, intellectually and your project?
- 10.30-11.00: Coffee & Questions
- 11.00-12.15: **Søren Brier (SB) 1:**  
*Why is objective information not enough to build a transdisciplinary theory of information, cognition and communication?*  
*The paradigmatic problem of physicalism and informationalism. Cybersemiotics star.*
- 12.15-13.00: Lunch
- 13.00-13.45: **I. Student presentation and discussion of project and its methodological problems.**
- 13.45-14.45: **SB 2: *The phenomenological-semiotic-intersubjective point of departure for transdisciplinarity. The Cybersemiotics star.***
- 14.45-15.15: Coffee & Questions
- 15.15-16.00: **II. Student presentation and discussion of project its methodological problems.**
- 16.00-17.00: **Torkild Thellefsen: *C.S. Peirce's theory of information.***
- 18.00: We eat a buffet dinner together with meat, fish and pure vegetarian dishes right after the course at CBS.

### Tuesday August 13

- 9.00-10.00: **SB 3: *Second order cybernetics from Bateson to von Foerster and Spencer Brown.***
- 10.00-10.30: Coffee & Questions
- 10.30-11.30: **Claus Emmeche: *The research political problems of inter- and transdisciplinarity.***
- 11.30-12.15: **III. Student presentation and discussion of project and its methodological problems.**
- 12.15-13.00: Lunch

- 13.00-14.45: **SB 4: Autopoiesis from Maturana to Luhmann. What's the paradigmatic idea?**
- 14.45-15.15: Coffee & Questions
- 15.15-16.00: **IV. Student presentation and discussion of project and its methodological problems.**
- 16.00-17.00: **SB 5: Ethology and the problem of a scientific theory of the animal mind and its evolution.**

### **Wednesday August 14**

- 9.00-10.00: **SB 7: The ideas of the semiotic paradigms: Saussurian and Peircean.**
- 10.00-11.00: **SB 8: Embodiment, consciousness and evolution.**
- 11.00-11.30: Coffee & Questions
- 11.30-12.15: **V. Student presentation and discussion of project and its methodological problems.**
- 12.15-13.00: Lunch
- 13.00-14.00: **Frederik Stjernfelt: C. S. Peirce's view of inter- and transdisciplinarity.**
- 14.00-14.30: Coffee & Questions
- 14.30-15.15: **VI. Student presentation and discussion of project and its methodological problems.**
- 15.15-16.15: **SB 9: Peircean synechism, tychism, agapism and hyloism and how it leads to pragmatism.**
- 16.15-17.00: **VII. Student presentation and discussion of project and its methodological problems.**

### **Thursday August 15**

- 9.00-10.15: **SB 10: The development of the biosemiotic idea. Uexkull, Sebeok, Hoffmeyer.**
- 10.15-10.45: Coffee & Questions
- 10.45-11.30: **VIII. Student presentation and discussion of project and its methodological problems.**
- 11.30-12.15: **IX. Student presentation and discussion of project and its methodological problems.**
- 12.15-13.00: Lunch
- 13.00-14.30: **Jesper Hoffmeyer: Biosemiotics as a bridge between science and humanities.**
- 14.30-15.00: Coffee & Questions

15.00-15.45: X. Student presentation and discussion of project and its methodological problems.

15:45-17:00: SB 11: The importance of ontological and metaphysical deliberations.

## Friday August 16

9.00-10.00: SB 12: *Science, semiotics and the religious dimension of meaning and rationality.*

10.00-10.45: XI. Student presentation and discussion of project and its methodological problems.

10.45-11.15: Coffee & Questions

11.15-12.15: XII. Student presentation and discussion of project and its methodological problems.

12.15-13.00: Lunch

13.00-14.30: Sara Cannizaro: *Biosemiotics as Systems Theory: an Investigation into Biosemiotics as the Grounding for a New Form of Cultural Analysis.*

14.30-15:00: Coffee & Questions

15.00-16.00: Collective discussion with Cannizaro and Brier of the transdisciplinary knowledge and problems dealt with so far by participants.

16:00-17:00: Evaluation and suggestions for improvements plus suggestions for follow up courses.



## Literature List

### First Priority:

Brier, S. (2008). *Cybersemiotics: Why Information is not enough* first published in 2008 at Toronto University Press and again in 2010 with small corrections. [READ THAT FIRST! YOU NEED TWO MONTH!](#)

Cobley, Paul: "Second-order thinking, first-class reasoning". *Signs* 3, pp. 69-107 (2010; ISSN: 1902-8822. (11,000 words) A deep review of: *Cybersemiotics: Why Information is not Enough*.  
[http://vip.db.dk/signs/Articles\\_Signs\\_International\\_Section/2010/Paul\\_%20Cobley\\_Second-order\\_thinking\\_24\\_June\\_2010.pdf](http://vip.db.dk/signs/Articles_Signs_International_Section/2010/Paul_%20Cobley_Second-order_thinking_24_June_2010.pdf)). This is a good overview and discussion of the book. The best review produced.

Thellefsen et al (2011): *From First to Third via Cybersemiotics: A Festschrift Honoring Professor Søren Brier on the Occasion of his 60<sup>th</sup> Birthday* (Scandinavian Book, 2011; 978-87-7071-028-3), Copenhagen: SL books.

The book can be purchased at:

[http://www.amazon.com/s/ref=nb\\_sb\\_noss?url=search-alias%3Daps&field-keywords=From+First+to+Third+via+Cybersemiotics&x=12&y=15](http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Daps&field-keywords=From+First+to+Third+via+Cybersemiotics&x=12&y=15) (

In this unique book there are chapters by Ole Nedergaard Thomsen, Paul Cobley, Winfried Nöth and Lucia Santaella, Gordana Dodig-Crnkovic, Philip Guddemi and Marcel Danesi developing and commenting on Cybersemiotics plus two chapters by Thellefsen and Bent Sørensen on Peirce's philosophy.)

Each lecturer will present an article to every one for reading before the course.

### Supplemental Reading:

Brier, S (2004) *Cybersemiotics and the problems of the information-processing paradigm as a candidate for a unified science of information behind library information science*, *Library Trends* Wntr, 2004 ,  
[http://www.findarticles.com/p/articles/mi\\_m1387/is\\_3\\_52/ai\\_n6080408](http://www.findarticles.com/p/articles/mi_m1387/is_3_52/ai_n6080408)

Brier, S. (2006): "The foundation of LIS in information science and semiotics", *Libreas: Library Ideas* 1 [http://www.ib.hu-berlin.de/~libreas/libreas\\_neu/ausgabe4/pdf/001bri.pdf](http://www.ib.hu-berlin.de/~libreas/libreas_neu/ausgabe4/pdf/001bri.pdf)

Brier, S. (2008a): "Bateson and Peirce on the pattern that connects and the sacred", Chapter 12 pp- 229-255 in Hoffmeyer, J. (ed.) (2008): 'A Legacy for Living Systems: Gregory Bateson as a precursor for biosemiotic thinking, *Biosemiotics* 2, London: Springer Verlag.

Brier, S. (2008b): "A Paradigm for Biosemiotics", *Signs* 2008, pp. 30-81.  
[http://vip.db.dk/signs/artikler/Brier%20\(2008\)%20the%20paradigm%20of%20peircean%20biosemiotics.pdf](http://vip.db.dk/signs/artikler/Brier%20(2008)%20the%20paradigm%20of%20peircean%20biosemiotics.pdf)

- [Brier, S. \(2008c\). A Peircean Panentheist Scientific Mysticism. \*International Journal of Transpersonal Studies\*; vol. 27, p. 20-45](http://www.transpersonalstudies.org/ImagesRepository/ijts/Downloads/A%20Peircean%20Panentheist%20Scientific%20Mysticism.pdf)  
<http://www.transpersonalstudies.org/ImagesRepository/ijts/Downloads/A%20Peircean%20Panentheist%20Scientific%20Mysticism.pdf>
- Brier, S. (2010): Cybersemiotic Pragmatism and Constructivism, *Constructivist Foundations* 5(1): 19-39.  
<http://www.univie.ac.at/constructivism/journal/5/1/019.brier>
- Brier, S. (2001d): [Cybersemiotics: An Evolutionary World View Going Beyond Entropy and Information into the Question of Meaning](http://www.livingbooksaboutlife.org/books/Biosemiotics), in Wheeler, W. (ed.) *Biosemiotics: Nature/Culture/Science/Semiosis*. JISC, Open Humanities Press.  
<http://www.livingbooksaboutlife.org/books/Biosemiotics>
- Sørensen, B., Brier, S. and Thellefsen, T. (2011): Cosmos and creativity: Man in an evolving universe as a creative, aesthetical agent —some Peircean remarks, *Semiotica* 187–1/4 (2011), 213–227.
- Brier, S. (2011): “Cybersemiotics: A New Foundation for Transdisciplinary Theory of Information, Cognition, Meaning, Communication and Consciousness” *Signs*, vol. 5 (2011): pp. 75-120, 2011 ISSN: 1902-8822,  
[http://vip.iva.dk/signs/Articles\\_Signs\\_International\\_Section/2011/Brier%202011%20Cybersemiotics%20Whole%20article%20short%20version%20version.pdf](http://vip.iva.dk/signs/Articles_Signs_International_Section/2011/Brier%202011%20Cybersemiotics%20Whole%20article%20short%20version%20version.pdf)
- Cobley, Paul: “[Cybersemiotics and Human Modelling](http://www.mdpi.com/1099-4300/12/9/2045/)”. *Entropy* **2010**, 12(9), pp. 2045-2066.  
<http://www.mdpi.com/1099-4300/12/9/2045/>
- Johansson, K. E. L. (2012) “Instances of Consciousness - An essay on the signs of evolution” approved for *Cybernetic & Human Knowing*, Vol. 19, no.4.
- Sørensen, B., Brier, S. and Thellefsen, T. (2011): “Cosmos and creativity: Man in an evolving universe as a creative, aesthetical agent —some Peircean remarks”. *Semiotica* 187-1/4 (2011), pp. 213–227.

## Background Literature:

### G. Bateson

- Bateson, G. (1973): *Steps to an ecology of mind*, Paladin, USA, Great Britain.  
 — (1980): *Mind and Nature: a Necessary Unit*. USA: Bantam Books.
- Bateson, F. and Bateson, M. C. (2005/1987): *Angels Fear: Towards an Epistemology of the Sacred*, New Jersey: Hampton Press.
- Hoffmeyer, J. (ed.)(2008): *A Legacy for Living Systems: Gregory Bateson as a precursor for biosemiotic thinking*, Biosemiotics 2, London: Springer Verlag.

### C. S. Peirce and Theories Based on his Semiotics

- Bertilsson, T. M. (2009): *Peirce's theory of inquiry and beyond*, Berlin, New York: Peter lang.
- Sherif, J.K.(1994): *Charles Peirce's Guess at the riddle: Grounds for human significance*, Bloomington: Indiana University Press.

- Colapietro, V.M (1989): *Peirce's Approach to the Self: A Semiotic view on Human Subjectivity*, New York: State University of New York Press.
- Esposito, J.L. (1980): *Evolutionary Metaphysics: The development of Peirce's Categories, Ohio: Ohio University Press.*
- Murphy, M. G. (1993). *The development of Peirce's Philosophy*, Indianapolis: Hackett Publishing Company.
- Kultgen, J.K. (1959-60). The "future metaphysics" of Peirce and Whitehead". *Kant-Studien* 5 (1959-60): 285-293.
- Liszka, J. J. (1996). *A General Introduction to the Semeiotic of Charles Sanders Peirce*. Bloomington: Indiana University Press.
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- Nöth, W. (2009): On The Instrumentality And Semiotic Agency of Signs, Tools, and Intelligent Machines", *Cybernetics & Human Knowing*, Vol. 17, No. 3-4.
- Parker, K. A. (1998). *The Continuity of Peirce's Thought*. Nashville and London: Vanderbilt University Press.
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- Peirce, C. S. (1892b). The Law of Mind. *The Monist*, Vol. II, n. 4, July, pp. 533-559
- Peirce, C. S. (1893). Evolutionary Love. *The Monist*, Vol. III, No.2, January 1893, 176 p.
- Peirce, C. S. (1931-58): *Collected Papers vol. I-VIII*. (eds.) Hartshorne and Weiss. Cambridge MA: Harvard University Press.
- Peirce, C. S. (1955): *Philosophical Writings of Peirce: Selected and Edited With an introduction by Justus Buchler*, New York Dover Publications.
- Peirce, C. S. (1958): *Selected writings: Values in a universe of chance*, ed. with an introduction and notes by Philip P. Wiener, New York: Dover Publications.
- Peirce, C. S. (1980). *New Elements of Mathematics*. Amsterdam: Walter De Gruyter Inc.
- Peirce, C. S. (1992). *The Essential Peirce: Selected Philosophical*, Volume 1 (1867-1893). (Eds.) Houser, N. and Kloesel, C., Bloomington: Indiana University Press.
- Peirce, C. S. (1994 [1866-1913]): *The Collected Papers of Charles Sanders Peirce. Electronic edition* reproducing Vols. I-VI ed. Charles Hartshorne & Paul Weiss (Cambridge: Harvard University Press, 1931-1935), Vols. VII-VIII ed. Arthur W. Burks (same publisher, 1958). Charlottesville: Intalex Corporation.
- Potter, V. (1997): *Charles Sanders Peirce: On Norms and Ideals*, New York: Fordham University Press.
- Raposa, M. (1989): *Peirce's Philosophy of Religion*, Peirce Studies number 5, Bloomington and Indianapolis: Indiana University Press.
- Turrisi, P. A. (Ed.) (1997): *Pragmatism as a Principle and Method of Right Thinking: The 1893 Harvard Lectures on Pragmatism*, Albany: State University of New York Press.



## Spencer-Brown

Spencer-Brown, G. (1972): *Laws of Form*, 2<sup>nd</sup> edition. New York: Julien Press.

Spencer Brown, G. (1993/94), "Self-reference, Distinctions and Time", *Teoria Sociologica*, Vol 2-3 No 1, pp. 47-53.

## Mysticism and Philosophy

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Suzuki, D. T. (2002): *Mysticism: Christian and Buddhist*. Routledge Classics, London

## Ethology

Lorenz, K. (1966): *On Aggression*, London: Methuen

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Lorenz, K. (1977): *Behind the Mirror: a search for a natural history of human knowledge*, London; Methuen & Co Ltd.

Thorpe, V.H. (1979): *The Origin and Rise of Ethology: The Science of the Natural Behaviour of Animals*, Heinemann, London

## Biosemiotics

El-Hani, Charbel Niño, João Queiroz and Claus Emmeche (2006). A semiotic analysis of the genetic information system. *Semiotica* 160 (1/4): 1-68.

El-Hani, Charbel Niño, João Queiroz and Claus Emmeche (2009). *Genes, Information, and Semiosi..* Tartu: Tartu University Press. (ISBN 978-9949-19-038-6, ISSN 1406-4278)

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- Hoffmeyer, J (1997): *Signs of Meaning in the Universe*, Indiana University Press, Indiana, USA.
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- Hoffmeyer, J (2002): The central dogma: A joke that became real, *Semiotica*, 138-1/4, pp1-13.
- Hoffmeyer, J. (2010): A biosemiotic approach to health, pp. 21-41 in Cowley, Stephen J., Major, João C., Steffensen, Sune V., Dinis, Alfredo (2010): *Signifying Bodies, Biosemiosis, Interaction*
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## **Autopoiesis and Second-order Cybernetics Plus Luhmann's System Theory**

- Leydesdorff, Loet (2012): Luhmann's Communication-Theoretical Specification of the 'Genomena' of Husserl's Phenomenology, Forthcoming in: Edmundo Balsemão Pires (Ed.), *Public Space, Power and Communication*, University of Coimbra, Portugal (received as PGF from the author by email 20. february 2012).
- Leydesdorff, Loet (2009). Non-linear dynamics of meaning processing in social systems. *Social Science Information* 2009, 48; 5.
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- Maturana, H. & Varela, F. (1986): *Tree of knowledge: Biological Roots of Human Understanding*, Shambhala Publishers. London.

## **Information Theory**

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- Deacon, T W. (2008), " Shannon – Boltzmann – Darwin: Redefining information (Part II)", *Cognitive Semiotics*. 2: 169-196.
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## **Philosophy of Science and Transdisciplinarity**

- Latour, Bruno, 1993. *We Have Never Been Modern*. (translated by Catherine Porter), Cambridge, Massachusetts: Harvard University Press.

Latour, Bruno. 2004. *Politics of nature: How to Bring the Sciences Into Democracy*, New York: Harvard University Press

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## Phenomenology

Heelan, P.A. (1987). Husserl's later philosophy of natural science. *Phil. Sci.* **1987**, 53, 368-390.

Heelan, P.A. (1983). *Space-perception and the Philosophy of Science*. Berkeley: University of California Press.

Husserl, E. (1970) *The Crisis of European Science and Transcendental Phenomenology*. Translated by David Carr; Northwestern University Press: Evanston, IL, USA, 1970.

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## **Additional Information**

**Credits:** 5 ECTS

**Course Language:** English

**Course Fee:** 6,500 DKK (covers the course, coffee, tea and lunch)

**Deadline for Registration:** 1. May 2013

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