Meaning for Life

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Barbieri (with Emmeche, Hoffmeyer, Kull, and Markoš):

Biosemiotics = Introduction of meaning to biology

- either **explicitly** into a theoretical concept of biosemiotics (e.g. Barbieri or Markoš)
- or **implicitly** so that some idea of meaning or meaningfulness is included in the other introduced semiotic concepts — like sign, semiosis, interpretation, *Umwelt*, information.

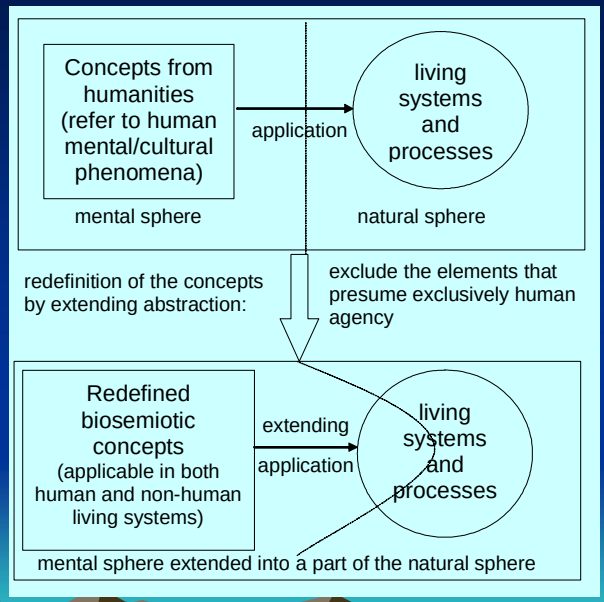
How meaning can be introduced to biosemiotics?

Biosemiotics forms a species of *mental models of life:*

- Living systems and processes are seen as of mind-kind to some extent.
- Biosemiotics involves an application of some originally semiotic or mental concepts —like meaning— to natural living phenomena.
- However, semiotic concepts contain some hidden elements that are applicable exclusively to human organisms (or societies).

ð **Semiotic concepts** cannot be applied as such in natural phenomena.

ð **They have to be adjusted and redefined.**



Problems in introducing semiotic concepts in biology:

- The risk of falling into anthropomorphic errors still threatens, because the exclusively anthroposemiotic elements may remain deep in the structure of the biosemiotic concepts.

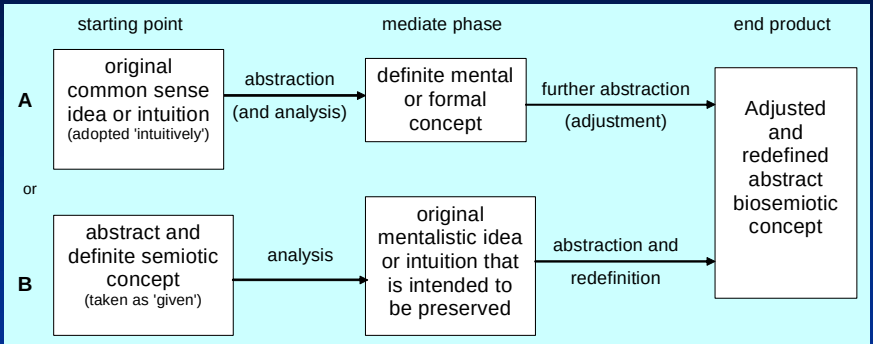
ð The semiotic concepts that are applied and their derivations should be thoroughly understood in their original context.

- More commonly, semiotic concepts seems to be acquainted only superficially.

ð Usually, they are not the (definite) semiotic **concepts** that are tried to introduce to biology, but rather some more or less **vague ideas** or **intuitions** about meaning, sign-process, interpretation, information, etc. that we try to introduce to biology.

ð These intuitions should be somehow 'de-anthropomorphisized' in the process of extending redefinition of the characteristically biosemiotic concepts.

Two routes of introducing semiotic concepts into biology



A Either starting from some common sense intuition about meaning, sign, etc. proceeding via formation of more definite formal or mental conception that is further abstracted and 'de-anthropomorphisized' to hopefully definite biosemiotic concept, or

B starting from some already abstracted definite concept of some semiotic tradition, analyzing and identifying its anthropomorphic elements, choosing the core-meaning that is wanted to be preserved, and eventually, making the final abstraction and redefinition of hopefully definite biosemiotic concept.

Some possible intuitive starting points

for the fixation of the core-meanings of biological meaning

	character of emotional or subjective mental state	systemic/formal or energetic/pragmatic character
communicative orientation	• **subjective intentional meaning**: the conscious intention (or mental state) of the utterer (Saussure, Barbieri?)	• **communicated meaning**: the content that is encoded in or can be inferred from the semantic structure of the utterance (independently on utterer's intentions) (behaviorism, Artmann, Freud?) • **pragmatic meaning 1**: meaning as the actual use of the sign in communicative community (speech act semantics, Wittgenstein?)
epistemic or transcendental orientation	• **emotional meaning**: the sum of the subjective feelings that a sign or other stimulus launches (existentialism, Uexküll, Kull, Emmeche?)	• **logical meaning**: the sum of the logical consequences of a representation (truth condition semantics, Peirce's pragmaticism) • **meaning in Batesonian information**: that difference which is made by another difference (Bateson, Hoffmeyer?) • **pragmatic meaning 2**: the sum of the true effects of the sign on all of the emotional, reactional, habitual, and conceptual levels. (James, Dewey, Hoffmeyer?)

Intuitions from which the argumentation for the more definite concept of meaning starts. These starting point intuitions are considered in relation with the **end-products** of the derivation of the concept of meaning, whether the argumentation leads to concept that is **Static structural**, **Dynamic emotional**, or **Dynamic pragmatic.**

Static structural concept of meaning

Saussure (semiology)**:**

- Starts from the idea of **emotional meaning** but ends up to the conception only **negative** value to subjective mental states.

ð Subjective mental contents can be identified only as **differences** within the synchronic system of signs (*langue*).

ð Meanings have no role in the evolution of synchronic systems — their evolution is due to ***external forces.***

ð Meanings are implicitly **already existing within the synchronic semiological system** and this system determines subjective experiential meanings.

ð Saussure's argumentation for his conception deconstructs its starting point intuition ð problematic, or at least unconvincing.

ð Application in biosemiotics: limited to fixed habits, not in evolutionary, ontogenetic, immunological, etc. processes where some **new** structures or behaviours emerge.

Static structural(?) concept of meaning

Barbieri — organic meaning and codes

- Does not rely on Saussure but resembles his results to certain extent…
- Starts from the common sense intuition of the arbitrary correspondence between a word and an mental image (like Saussure) but emphasizes the role of mediator, human brains/mind, where the connecting rule (code) is embodied.

ð Organic meaning defined in terms of organic code and codemaker. Codemaker embodies the code that connects two distinct realms arbitrarily.

ð Most primitive organic code = genetic code. Amino acids are organic meanings of codons connected by ribotype-codemaker (mRNA+tRNA+ribosome).

ð Static system: - Do not explain the origin of code (that has been static for ages), codemakers do not make code but 'meanings' *according* to code,
- already existing stable set of '20 basic meanings', for which the definition cannot provide any positive value — as nominable entities they are only distinguishable to each other — still, material properties of proteins should be significant,
- do not explain (or describe) molecular ***semiosis***, i.e. *why* a certain individual protein is produced in an individual transcription process (explains only *how* it is produced).

Dynamic concepts of meaning: Peirce

- Two natural starting point intuitions that may wanted to be preserved:
  1. either meaning as a subjective feeling (emotion) or intention
  2. or meaning as externally detectable consequences → various forms of pragmatism.
- Charles S. **Peirce**'s ***pragmaticism*** was developed for the theory of meaning:

  "What is wanted, therefore, is a method for ascertaining the real meaning of any concept, doctrine, proposition, word, or other sign. The object of a sign is one thing; its meaning is another. Its object is the thing or occasion, however indefinite, to which it is to be applied. Its meaning is the idea which it attaches to that object," (Peirce: CP 5.6, c.1907)
- Peirce's triadic conception of sign provides a dynamic approach and it seems to involve *both* an idea of subjective feeling (***emotional interpretant***) *and* detectable consequences:

  "the problem of what the "meaning" of an intellectual concept is can only be solved by the study of the interpretants, or proper significate effects, of signs. (…) The first proper significate effect of a sign is a feeling produced by it. There is almost always a feeling which we come to interpret as evidence that we comprehend the proper effect of the sign," (Peirce, CP 5.475, c.1907.)

Dynamic concepts of meaning: Peirce

- The definition of meaning, *'the maxim of pragmatism'*:

  "Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object." (CP 5.402, 1878)
- Notice: meaning is not in actual consequences of a sign but it is a ***conception*** about the conditions of any 'would-be' actions in any *conceivable* circumstances.

ð Peirce's pragmaticistic concept of meaning is special type of **logical meaning** — meaning is a 'proposition' that can be used as guiding the possible action. It contains information what would be rational to act in different circumstances.

ð Peirce was interested only in intellectual or rational meaning:

"I understand pragmatism to be a method of ascertaining the meanings, not of all ideas, but only of what I call "intellectual concepts," that is to say, of those upon the structure of which, arguments concerning objective fact may hinge." (CP 5.467)

Problems with feelings in Dynamic concepts of meaning

ð Emotional interpretant is not a proper meaning of a sign — it has only instrumental value:

"My pragmatism, having nothing to do with qualities of feeling, permits me to hold that the predication of such a quality is just what it seems, and has nothing to do with anything else. Hence, could two qualities of feeling everywhere be interchanged, nothing but feelings could be affected. Those qualities have no intrinsic significations beyond themselves." (Peirce, CP 5.467)

ð Emotional interpretants are significant only when they are means of producing ***energetic*** and ***logical interpretants*** that are in dynamic relation with the 'external world' (and therefore detectable also by external observer).

ð Important point for possible biosemiotic application:
emotions and feelings are significant only when they have behavioral effects or only when they modify the habits of possible behaviour — otherwise they are epiphenomenal.

ð Besides, externally observable behaviour is our only access to internal world ('feelings') of animals (including other humans).

Problems in application of Peirce's concept of meaning

§ Peirce do not provide any other conception of meaning that would not be subordinate to the concept of logical meaning: Peirce have no conception of psychical meaning, etc.

ð Also the application of Peirce's concepts of triadic sign and semiosis in biosemiotics becomes suspicious:

ð The ultimate, complete meaning of a sign is its final logical interpretant which is a habit of action. Still, not all habits are logical interpretants — only those are that are produced via *self-controlled* (or *deliberate*) formation of thought, i.e. through rational inquiry. (Cf. EP 2:414).

ð Peirce's concept of sign is a representational concept: a sign represents its object, and its interpretants are further signs that tend to represent the object ever fuller way.

ð Logic is a science of self-controlled thought i.e. about sign that controls its own interpretation. ð Quest for truth is build in into the triadic structure of sign.

§ But living systems do not search for true representations in thought, instead they try to act successfully.

Other normative sciences

- **Bateson** — definition of information:

  "the elementary unit of information is a difference that makes a difference" (Bateson 1972: 459)

  – Possible concept of meaning of a significant difference, i.e. of a difference that is not merely detectable by some agent (i.e. that raises 'feelings'), but the detection of which has additionally some causal consequences in the agent:

  – Meaning as that difference which is made by the detected difference.

ð Non-representational concept, but additional determinations are needed.

(As such it is compatible also with static meaning of structuralism.)

§ **Logic** was only one of the three **Normative sciences** for Peirce:

§ Logic = science of self-controlled or deliberate thought.

§ Practics (ethics) = science of self-controlled or deliberate conduct (action).

§ Esthetics = science of self-controlled formation of ideals, (i.e. of that which is admirable in itself).

ð Logic is a subspecies of Practics (thought is one kind of action).

ð Practics is more general normative science than logic, thus it should be unaffected by logical cosiderations.

Other normative sciences

§ Peirce did not have time to develop his Practics and Esthetics much.

ð Proposal: adjustment of Peirce's pragmatic maxim to **Practics**, definition of a **Pragmatic meaning**:

"C*onsider what practical consequences could conceivably follow if a plan of action would be realized. Then their sum is the ethical/practical meaning of the action."* (togeher with Mika Renvall).

§ This together with Bateson's concept of information and with a non-representational concept of practistic sign (*anticipative representation*, cf. Vehkavaara 2003) may serve a promising starting point for determining the general concept of biological meaning.