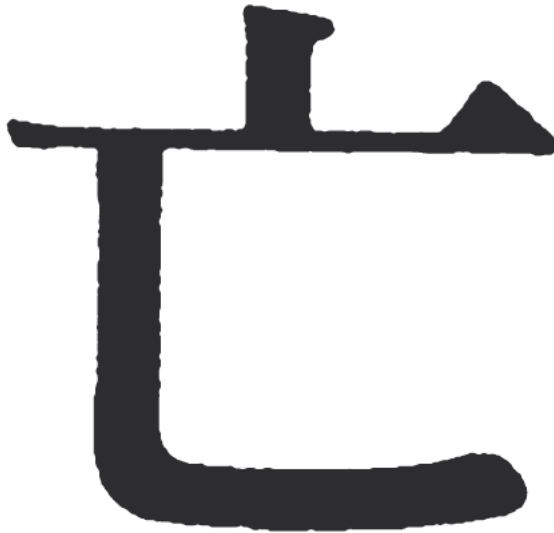


Roberto Bordogna

# THE BEAUTIFUL-MATCH

Ambit-awareness-practice  
pragmatic researches

FRANCO ANGELI



*La cultura della comunicazione*

I lettori che desiderano informarsi sui libri e le riviste da noi pubblicati possono consultare il nostro sito Internet: [www.francoangeli.it](http://www.francoangeli.it) e iscriversi nella home page al servizio “Informatemi” per ricevere via e-mail le segnalazioni delle novità.

Roberto Bordogna

# **THE BEAUTIFUL-MATCH**

Ambit-awareness-practice  
pragmatic researches

**FRANCOANGELI**

## **Front cover**

Japanese 'Mu' (*The Being Destroyed – The Ultimate Common*).

### ***Mu***

86 (Nelson number)

**J4b34 (Japan Industrial Standard code number)**

M287 (Morohashi's *Dai Kanwa Jiten* code number).

(One of the 1006 characters designed to be learned by the Japanese Ministry of Education in the six years of elementary school).

From: *The Compact Nelson. Japanese-English Dictionary* (by Andrew N. Nelson), abridged by John H. Haig and the Department of East Asian Languages and Literatures, University of Hawai'i at Mānoa, Tuttle Publishing (Tokyo, Rutland, Vermont, Singapore), HK, 1999.

Copyright © 2012 by FrancoAngeli s.r.l., Milano, Italy

*L'opera, comprese tutte le sue parti, è tutelata dalla legge sul diritto d'autore. L'Utente nel momento in cui effettua il download dell'opera accetta tutte le condizioni della licenza d'uso dell'opera previste e comunicate sul sito [www.francoangeli.it](http://www.francoangeli.it).*

# *Contents*

Foreword	pag.	7
Introduction	»	11
1. The ambit-awareness-practice of communication	»	17
2. The Cusanus' participation and cross-cultural communication	»	22
3. The ambit of gestures	»	33
4. The creative reasoning	»	36
5. The 'invisible' agency	»	44
Conclusion	»	52
Laboratory: simple experiments with comments	»	54
Key concepts	»	60
General Bibliography, with notes	»	88
Appendix 1	»	100
Appendix 2	»	103



## *Foreword*

The aim of this work, in a nut shell, is to support the diffusion of a matter-of-fact creative learning practice, capable to leverage on theories that work, dealing with ‘reality’ also through new multimedia technologies, to communicate and innovate.

The basic hypothesis of the book is that there is some form of ‘real’ participation or community among ‘hearts and minds’, the ‘abstract’ and the ‘concrete’, theory and practice, that appears suitable to study effective communication.

For this reason I have decided to name this work ‘the beautiful-match’, a title that means a challenging quest for unity, that may provide perhaps a little light.

The materials of this work have been accumulating through the years, first in professional experiences and later, in a number of courses, mainly on digital communication as agency at Pavia University (Italy), in almost two decades. The actual course, that may be considered also a crash course on Knowledge Representation as a support to communication, is an introduction to more advanced studies, and it is dedicated to the undergraduates of the Faculty of Engineering and Economics of the third year. It is named Pragmatic multimedia laboratory with reference mainly to Charles Sander Peirce Pragmatism (but it is also inspired as well by Italian pragmatists contributions – such as those of Giovanni Vailati, a logician and an engineer who was also interested in Economics, 1863-1909).

Technology is presented in the lessons, but it is not the main object of this work, that is focused on core knowledge representation techniques and cross-cultural communication issues (ranging from communication to awareness systems and application embedded in ‘objects’ and the territory). The course presents established state-of-the-art doctrines and practice, evaluated within an international working groups on standard ontology, or formal description of ‘objects’ to support the world-class cross-communi-



cation among various automated systems (that in this work are addressed only partially, and mainly in the Key concept section of the work).

The Key concept section has the goal to be a quick reference backgrounder for the average reader.

In other words the hope is to educate the student to a matter-of-fact independent creative learning and thinking, practicing the use of formal logic, together with technologies based on standard world-class multimedia platforms such as Internet, smart phones and the likes. But the discussion is about general issues of creativity and understanding.

Usually the participants are invited to test the proposed theoretical contribution in a context of their choice, typically developing simple prototypes and various systems of interest to local communities and various organizations, working in multidisciplinary teams, when possible and opportune. The suggested working method it is the ‘pragmatic rule’ (that recommends to test hypothesis with experiences), a methodology that might be of interest also to the general readers.

In short the work is focused on doctrines together with practice, with a pragmatic ideal-realist new approach that stresses the study of a global ambit of communication, supported by the world class mobility and communication infrastructure, also *matching* Asian, particularly Japanese, philosophical contributions with Pragmatism.

This is also the reason of writing this work in English, in the firm belief that a bad English is more useful than a good Italian, at least in the global world of Engineering, Economics and World-class Communication, that deals with global institutions, industries, markets, products, infrastructures, cultures and ideas that need a global standard working language.

The graphics is almost absent in the work, to allow a quick download of this little book even on a smart-phone with a slow connection to the network.

The access to the list of Key concepts included, with notes, is also designed to be essential and competitive with an Internet search on the same subject, for similar reasons.

In this sense this work may be perhaps of some appeal to practitioners interested in knowledge acquisition and sharing (the work has been inspired also by the participation to an Usa Government driven multinational influential working group, for almost a decade – see Appendix 2) and to the general public (a simple experiment – CreaPtion: the creativity practice – described in the work and based on a simple blackboard but of general use – is currently on going in a Milan city center bookstore and elsewhere).

Reading the Appendix 1 the general reader may have a quick idea of the aim of the book, while the Appendix 2 is more suitable to professionals and the informed reader, for the same goal.

All that said, the writer hopes also to gain some interest of scholars seeking ‘theory that works’, in what here is called the study of the ambit of awareness practice, or a context where ‘beings’ are pragmatically identified, that may be also traced back to a number of ancient doctrines. For this reason notes and short excerpts are added to the general bibliography.

The book is designed as working tool that the reader may be willing to update or integrate in function of his/her needs, and has been written with the assumption of an active reading, knowing that sometimes understanding can not be communicated with words, but must be personally experimented in some ambit of practice, as the gestures do.

For this reason a list of simple experiments is also provided to the attention of the reader.

These resources are designed to support the core discussions of the work, that may be considered a release about a list of commented conjectures, to use the Cusanus concept applicable to any assertion, and it is presented to the reader to be verified, in some practice of the ‘real world’, by the reader himself, accordingly to the pragmatic rule, as the student generally do in the course at the Collegio Nuovo.

At the same time the informed reader may have a direct and quick look at the main discussion of this work, that is designed to be as short as possible.

Milan and Pavia, March 3<sup>rd</sup> 2012



## *0. Introduction*

Practice, pragmatism in the sense of Charles Sander Peirce (the American philosopher and logician 1839-1914) ideal-realist doctrine and an experimental working style, when possible, are guiding orientations in this work, as well as the aim to address the modern needs of world class ‘real life’ technology supported (or mediated) communication.

The first step in communication is to be aware of prejudices, including cultural hidden ones.

Peirce characterizations of prejudices as (often) hidden hypotheses and fundamental drivers of judgments, together with his philosophical and logical contributions, have been generally well accepted as a suitable backgrounder to study technology supported communications in several engineering world-class working groups.

### **0.1. Any positive assertion is a conjecture**

Nevertheless it seems here important to stress the (old) position of thought accordingly to which every positive assertion is an assumption that must be verified with experiments or that, at least, must be supported by an established practice. Something that may be applied to Charles S. Peirce’s doctrine itself, as to any cultural ‘corpus’ of positive assertions.

That is to say that any positive assertion is what the Cusanus (the German cardinal Nicholas of Cusa 1401-1464 considered a precursor of Galileo), in his search of wisdom, called a conjecture.

Cusanus’ thinking is particularly interesting in clearing the fog of prejudices and arrogance.

He did not even considered the law of non-contradiction as absolute and was interested in how the mind participates to the ‘reality’ of the Cosmos (the universe).

His idea of the unity of the opposites ('coincidentia oppositorum') in the infinite (as in the projective geometry, where parallel lines converge into a point of the plane of the canvas that represents the infinite), his understanding of the relativity of any determination of magnitude (as in the case that he discussed about 'the beryllo' a natural lens capable – as any lens – to transform the 'micro' into the 'macro'), his conception of an inexplicable God, abiding beyond the opposites, makes his doctrine of 'learned ignorance' a Western bridge with some well established Eastern thinking (and apparently close to the Zen Buddhist tradition).

It is in fact a need today to deal with the agency of diverse cultures, as in those multimedia and video-games that blend advanced computer science and Western or Asiatic mythology for instance.

In fact course participants seems often exposed to cultures that may be characterized as paradoxical (as often appear to be several religious cultural corpus), that nonetheless appear to provide 'real' guiding beliefs to several individual persons and organizations.

The agency of art is also included in the discussion, for similar reason.

A few selected artists have been invited by the writer at the Collegio Nuovo course in the past years, to explain their working style to the students, with very valuable results, and an experimental case study about the ambit of creativity (CreaPtion), dedicated to the general public, has been developed also thank to those experiences, and it is operative since 2010 (see Appendix 1).

The emphasis on practice and 'real life' as a fundamental instrument of understanding also means that this work is concerned with language, but pays attention to any style of communication, including physical 'signs' such as gestures, that may create meaning together with the situation in which they occur, and to natural 'signs of themselves', as the actual people in their surroundings.

In fact physical persons may be considered also 'material signs' in a context of communication. A university, a military compound, an hospital or a mall, buildings, streets, vehicles are also signs and material 'sorting containers' of people and 'things' as well, because of some communality of every specific context. So do infrastructures and other various territorial 'objects', that are for instance suitable to be partially represented, with 'ad hoc' signs, in geographical information systems (GIS) or in the so called awareness systems, where various characterizations of critical situations, usually coming from many different sources, are merged for some sensitive goal, where standard representations and a common logic are clearly needed.

And the agency of all these contextual signs must be considered in a communication ambit, particularly to evaluate what is missing when the

surroundings are only partially represented as in any technology supported communication practice.

In synthesis the (pragmatically provisional) theoretical framework discussed in this work takes the aim to be as much comprehensive and inclusive as possible, seeking means to include also ‘facts of life’ that can not be expressed with words or that ‘arise’ in some contingent personal to common context of practical interaction, to use provisionally the words in their common sense.

## **0.2. The beautiful-match: matching the meaning**

In the established engineering practice conceptualizations are expected to be independent from any personal inclination. Feelings are considered often negligible, as in the study of the transmission of ‘information’ on communication lines, where the interest is about the technology, such as the syntax and the semantic of the communication protocols (Internet so called TCP/IP for instance), designed for information exchange among technological, so called, ‘agents’ in the network.

But if the goal is to characterize the possibility of meaning sharing among two persons in a phone call, these two ‘interpretants’, to use a pragmatic concept, and their ‘minds’ and ‘culture’ as well, and the contingency of the communication context (language, culture, emotions – for instance a call to the beloved person versus a professional call and so on), must be included in the ambit of study.

And there is more to be noted, not all communication styles look the same across cultures. Accordingly to a work on ‘Expressive Japanese’ (Senko K. Maynard, 2005) the problem of mediating through language empathy and the sharing of emotions among Japanese people, is studied in Japan since the Edo period (A.D. 1603-1868), as the main issue.

Empathy and emotions appear to be considered fundamental means of understanding in that culture (and simply said the global diffusion and popularity of Japanese cartoons – or Manga – in the West but also in East Asia – accordingly to Japanese media sources – it is a practical call for attention for the case).

## **0.3. The transforming rhetoric of Pathos: ‘kokoro no koe’**

In fact, while the Westerns apparently tend to describe events as an agent- patient relationship, [*agent-does*], Japanese are supposed to be more inclined to a [*topic-comment*] framework of communication, where

common feelings and emotions (often specifically Japanese) are shared, accordingly to a *transforming rhetoric of Pathos, where [something-becomes]* (Maynard 2005).

The 'essence' of the Japanese language is supposed to be '*kokoro no koe*', '*voices from the heart*' (Akira Suzuki 1764-1837).

Therefore it seems opportune, for a world-class technology supported effective communication ambit, to posit that some mediated emotional empathy is possible among human in that ambit.

And here we posit that it is possible to establish a practice that creates a generic common ambit of communication shared by the 'personal ambit' (or a non-common ambit that characterizes the contingent person as a 'community of functions' suitable for the communication case).

The assumptions are supposed to be defined and assessed through experiments, that the interpretants consider empathetic with the goal of a practice.

We are using at this point the words in their generic meaning, as defined in the Oxford dictionary, but in this work we will try to be more accurate, thank mainly to pragmatist conceptualizations (but looking at computability needs too), to propose a corpus of assumptions suitable to be tested, with opportune experiments, or in some practice, by results.

We will rely on the actual sentences as a context for the definition of special terms, as is the case of what here is called an '*ambit*', or a 'sphere' with an emphasis on the notion of relational extension, as it will appears in the discussions.

Personal, defined as non-common, ambit and the common ambit are clearly related. And may be considered a dyad personal-common ambit, defined by the negation of what is considered not to be a common for the case: the personal ambit. With this approach in mind here the participants to a communication ambit are first considered looking for commons, then each individual participant is considered as a variation of this common: a 'cut' from it.

The discussion about this personal-common ambit 'cut' may seems pedantic, or strange, but it is not. For example, talking about actual cuts, surgeons and tailors as agents appear to have different goals and views about their common ambits of practice, dealing with persons as patients, and so they do care, we are sure.

But here it is also accepted the (scientific) assumption that the understanding of the 'reality', is pragmatically possible and in this sense independent from any contingent interpretation, nevertheless being provisional and in need of a continuous quest (a condition that may reminds the Tao paradox 'to know of not be knowing').

The hypothesis is that to overcome this apparent paradox, at the center of centuries of endless discussions, it is opportune the pragmatic study just

of the ambit-awareness-practice, as a negation of a ‘nothingness’ that is considered to be the ambit. This is another apparently ‘strange’ assumption that, as we will see, offers a number of philosophical and computational advantages, similar to the role of the number 0 in arithmetic.

#### **0.4. Existence as not-nothingness**

The notion of a ‘negative’ space and that of nothingness (a non-concept in Asiatic cultures) are not the same (‘negative’ is opposed to ‘positive’, and nothingness may be opposed to existence), but here is intended to include such concepts as ‘being’, ‘entity’, defined as not-nothingness. This not-nothingness is a blunt extensions to material signs of Peirce Existential Graph Logic (that is based on the ‘negative’ space that is the white sheet of paper) aimed to pragmatically include the ‘reality’ as a whole (a ‘one’ that is beyond the mathematical one would say Plotinus).





# *1. The ambit-awareness-practice of communication*

We all use telephones and we do know from practice that somehow meaning and emotion sharing is possible between persons with that medium, within conditions that we may study with experiments.

For example the practice might be a conversation, an exchange of text or a picture and the likes between two persons on a phone, but in this work also other media of communication, including traditional material supports as a blackboard or a sheet of paper, will be considered as well.

The Interpretant persons (their personal ambits we might say generically) appear to share a common ambit in communication and the problem at hand may be stated to study the practice that takes place in given ambit created by an Interpretant Person A and an Interpretant Person B that establish a common media ambit C, of some kind, for the case among personal ambit A and B, with alternating agent-patient roles.

## **1.1. Identity and Equality in a contingent ambit of common practice**

Interestingly, if we start the analysis from the common ambit, positing ‘the unity of the many’, the form of the statement that describes the ambit of communication hypothesis appears similar to the well known and fundamental Equality Euclid’s axiom:

If  $A=C$ , and  $B=C$  then  $[A=[C]=B]$  or  $A=B$ .

If A and B and C stand in this case for the personal ambit of persons A and B, and C for the common ambit that they share, A and B are defined equal with reference to C.

The surprising fact, if the application of the Euclid axiom is right for the case, given the communication hypothesis, is that apparently there must be some community of 'signs' in the ambit of communication among human and the communication media that works, allowing for instance the human participants to share emotions in that contingency, also thank to the technology.

C may represent a list of 'items' (such as qualia, quanta and the likes) suitable to characterize the relation of C with A and B for the contingent ambit where  $A=C$ , and  $B=C$ . And in order of the equality with C to exist, also A and B should be characterized by the same list of common 'items' of C (where the number of common 'items' for A and B is grater or equal to the number of the common 'items' C).

An identity has the form  $A=A$ , in fact being the letter 'A' and 'B' diverse, if 'B' is not a definition of 'A', then the expression  $A=B$  conveys an equality with reference to some common C, as we said.

(For an in deep philosophical-mathematical discussion of the concept of equality the reader may see the Whitehead lecture, 1922, included in the 2004 book of papers reported in the bibliography).

In general the proposed characterization of a common ambit of communication appears to hold also if B or A is a generic 'entity', or if both A and B are not personal ambits but just physical devices' ambits (as in the case of communication with some embedded artificial agents – as an automated electrical lawnmower – in computer to computer communications and the likes), in this case the term proper-ambit will be used.

In fact humans, systems and machines, as well as other 'subjects' and 'objects' may share to some extent, a natural, an artificial (as a technology) and a cultural (as a set of symbols embedded on QWERTY keyboard for instance) ambit of material signs.

For example, motion of molecules of air to support compression and expansion waves (sound) exchange and heat dissipation, photons in case of light interactions with material and the persons' retina to collect and map lists of predicates (vectors as pixels of images or 'colours') in various ambits, energy transformations to support the practice in the ambit, icons as emotional cultural drivers, an so on.

It is now possible to define more precisely here what is intended with the ambit-awareness-practice (of communication), or an ambit that is established when 'existences' as a personal ambit (that is to say a not common ambit), or a proper ambit (that is to say not a-common ambit either), participate in communication.

## 1.2. A graph may represent the communication triad

Formally, in the basic case, it is possible to characterize an ambit of communication of A with B through the common C as an ambit defined by the following contextual list of items.

(i) First the three monads A, B, C (as qualia as a sounds, or a colors for instance);

(ii) Second the two dyads AC, CB (that could be characterized as relations – of equality for the case); being the dyad AB here not considered yet as independent because of the assumption for the case (defined by the interaction or the combination of A and B with the mediator C,  $A=C$  and  $B=C$ ).

(iii) Third one triad ACB that says that A is equal to B, because of C for the Euclidean axiom, that here is supposed to hold for the practice.

The triad is originated by the material conjunction of the two dyads and defines a communication ambit in which for instance the sign of the frequency of a sound it is (pragmatically for the case) ‘equal’ in A,B,C, so that an effective communication of a sound can take place from the person A on the line C to the person B.

If [] is a conventional null ambit, for instance the triad that defines the ambit could be represented as  $[A=C=B]$  where the relation (i), (ii) and (iii) are represented as a graph, something that appears similar to familiar chemical formulas, such as  $H=O=H$  (or  $H_2O$  water).

When the communication is established also the dyad AB holds as long as the ambit holds (for instance in a phone call as long as the communication line does not drop, but when it does all the dyad AC, BC holds, that is to say – if you are A – your phone is still in your personal-to-common ambit as well as the other phone – that uses the same C standard of yours – is in the ambit of the other personal-to-common ambit of B).

All the six independent ‘items’ must be present (eventually in different times as in the electronic mail transfer – that is a copy over the networked system C – of a message from A to B) to establish the generic ambit of the communication practice. But when the system is effective, or the ambit is established, all the items together define an ambit of practice, where C may become transparent to A and B (as in a video conference), so that there are no reason to exclude the dyad AB, as said ( $A=B$ ), as long as the communication ambit holds.

Remembering that empathy is described (by the *Oxford Dictionary*) with ‘the power of identifying oneself mentally with (and so fully compre-