

# On Analysis and its Role in Communication Theories

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**Márton Demeter**

Eszterházy College, Faculty of Communication and Media Studies, Hungary

**Abstract:** This paper tries to show that framing a propedeutics for a given discipline necessarily presupposes some so-called analytical movements with which the conceptual frame of the discipline could be related to itself, and to other disciplines as well. The situation is the same with communication studies, where, as this paper proposes, many of the so-called axioms of human communication should have been analyzed. After explicating the main types of analysis, the discussion tries to apply its analytical methods on Watzlawick's first axiom of human communication, and tries to show, that the statement that '*one cannot not communicate*' is either false or meaningless.

**Keywords:** propedeutics, analysis, communication, pragmatics, mental states, meaning

## Programme

Since the role which analysis plays in the formal and the so-called hard (or natural) sciences is unquestionable long before, it's unsurprising that social sciences also developed their analytic methods in time. Maybe it's not odd to say that the state of a given discipline could be estimated through its analytical methods, but, of course, it's not obvious that an analytical method should be explicitly called analysis. The main concern of this paper is to estimate the possible role of analysis in communication inquiry which could be informative in connection with the state of the discipline. For this end this discussion starts with the analysis of 'analysis' itself, then it tries to apply the various analytical forms to pure communication inquiry. Finally, as an object-lesson, the discussion ends with the analysis of the eminently antinomic but much popular statement that '*one cannot not communicate*'.

## Analyzing analysis

The English word 'analysis' obviously derives from the Greek ἀνάλυσις which first of all means loosing, releasing or dissolving (Liddel-Scott 1996), but also means problem solving.

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*Address for Correspondence:* Marton Demeter, email: demeter@komejournal.com

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In the logic, or more precisely, in the dialectics of Aristotle ἀνάλυσις means the process of the reduction of the imperfect figures into the perfect one. So analysis originally means a problem solving method, where the problem could be physical (as in the case of releasing a knot) and intellectual (as in the case of clarifying an ambiguous situation) as well. The manifold interpretations of the verb ἀναλύω (which stands for the English 'to analyze') strengthen the notion that analysis means, first of all, clarification, because ἀναλύω means to unloose, to undo, to set free, to cancel faults, to release from a spell.

But the fact that analysis is clarification could be affirmed without reference to its etymology: suffice it to say that the methods that call themselves analysis *do* clarification. Of course this short paper could not present a historically coherent picture of the concept of analysis, but it could delineate the most characteristic types. Let us suppose, that the logical structure of <Analysis> runs as follows.

- (1) Analysis <analyser<sub>i...</sub>; <analysandum<sub>i...</sub>; analysans<sub>i...</sub>>

The formula (1) means that the process of analysis should be interpreted as ordering, which requires three necessary constituents. So analyses include the matching of (at least) one *analysandum* and (at least) one *analysans* by (at least) one *analyser*, where the *analysandum* is the *target* of the analysis (which has to be analysed); *analysans* is the *product*, and *analyser* is the *agent* of the analysis. In linguistic terms, analysis could be interpreted with thematic roles<sup>1</sup> as follows.

- (2) The analyser analyses the analysandum for the analysans.

- (2a) λzλyλx {ANALYSE (x(y,z))}

- (2b) The analyser<sub>Ag</sub> analyses the analysandum<sub>T</sub> for the analysans<sub>P</sub>.

- (2c) AGENT ><sub>dep</sub> TARGET ><sub>dep</sub> PRODUCT

- (2d) /Analyse/[V]λx λy λz λs [ANALYSE(s) & Agent (z,s) & Target (y,s) & Product (x,s)]

The formulas (2) – (2d) show that, *logically*, the *analysans* depends on the *analysandum* which depends on the *analyser*. Of course it could be assumed that in an „analysis” the *analysandum* depends on the *analysans*, but in this case the analysis should be accounted as fake, or the thematic roles should be inverted as in (3).

- (3) (x)AG ><sub>dep</sub> (y)PRD ><sub>dep</sub> (z)TRG ⇒ (x)AG ><sub>dep</sub> (y)TRG ><sub>dep</sub> (z)PRD

The above mentioned consideration could be easily illustrated by a simple type of analysis, namely *translation*. Let's suppose that an agent tries to translate the English verb 'to occur' to German. Then the analysis would be translation, the *analysandum* would be the verb 'to occur', and the *analysans* would be 'vorkommen', and 'to occur' should be precede 'vorkommen'. When an agent tries to find an adequate match for 'vorkommen', then 'vorkommen' will be the *analysandum*, and 'to occur' will be the *analysans*. Of course, in the case of a simple translation, this kind of inversion could be easily perceived, but it should be kept in mind in the case of less common analyses too.

But the indefinite constituents of the formula (1) show that (1) could be interpreted many ways depending on the indices of the arguments. It means that, for example, plural analysans with singular analysandum makes a different kind of analysis than singular analysans with plural analysandum. Actually, every interpretation of (1) constitutes a type of it, so the following interpretations all have the logical structure of (1), but the same time they are quite unlike in practice.

### On the types of analysis

The statement that *definition* could be interpreted as a kind of analysis maybe run against the philosophical tradition but it may be tenable upon further consideration. The logical structure of definition runs as follows.

(4) Definition  $\langle \text{definiator}_{i\dots}; \langle \text{definiendum}_{i\dots}; \text{definiens}_{i\dots} \rangle \rangle$

Of course a middle-sized library could have been crowded with books discoursing on the philosophical tradition of the single word *definition*; but there are at least two interpretations in connection with definitions that should be certainly mentioned here. The problem here is similar with the Kantian question regarding mathematical and philosophical definition (Kant 1781). According to the first interpretation, definition should be considered as the determination of an intensional equality between expressions. In effect, here definition is *fixation*. For example, defining communication could be as follows.

(4) Definition  $\langle \text{definiator}_{i\dots}; \langle \text{communication}; \langle \text{information processing} \rangle \rangle \rangle$

(4a)  $\lambda z \lambda y \lambda x \{ \text{DEFINE} (x(y,z)) \}$

(4b) The definiator<sub>Ag</sub> define communication<sub>T</sub> for information processing<sub>p</sub>.

(4c) AGENT  $>_{\text{dep}}$  TARGET  $>_{\text{dep}}$  PRODUCT

(4d) /Define/[V] $\lambda x \lambda y \lambda z \lambda s$  [DEFINE(s) & Agent (z,s) & Target (y,s) & Product (x,s)]

The formulas under (4) show that here definition fixates the intensional equality of two expressions, namely 'communication' and 'information processing'. But a definition of this kind could be prosperous only if both expressions are parts of the language, and at least one of them is well known or retraceable to some self-evident fact or entity. The most famous example of definition of this kind is the circumscribe of bachelor as wifeless man, and definitions of this kind are usually called as analytical. Of course there are many wifeless men that could never be considered as bachelors, while no bachelor could have wife that squarely shows that analytical definitions could constitute semantical implications instead of intensional equality.<sup>ii</sup> Definitions of this kind could be easily found in the field of social sciences, and they could be called as *methodological definitions*.

But there are another sort of definitions that mostly take place in the field of formal sciences including mathematics and logics. Here definition means *constituting*, as in the case of (5).

(5) Definition  $\langle \text{definiator}_{i\dots}; \langle \text{fractal}; \langle \text{a set for which the Hausdorff Besicovitch dimension strictly exceeds the topological dimension} \rangle \rangle \rangle$ <sup>iii</sup>

- (5a)  $\lambda z \lambda y \lambda x \{ \text{DEFINE} (x(y,z)) \}$
- (5b) The definiator<sub>Ag</sub> define fractal<sub>T</sub> for a set for which the Hausdorff Besicovitch dimension strictly exceeds the topological dimension<sub>P</sub>.
- (5c) AGENT <sub>>dep</sub> TARGET <sub>>dep</sub> PRODUCT
- (5d) /Define/[V] $\lambda x \lambda y \lambda z \lambda s$  [DEFINE(s) & Agent (z,s) & Target (y,s) & Product (x,s)]

It's easy to see that in the case of (5) and related formulas (at least) the definiendum had been *constituted* by the definition. The ontological status of the constituted definiendum is an object of sustained controversy amongst philosophers and mathematicians, but the minimal notion that, at least conceptually, a new entity arises by the definition of this kind seems to be plausible as a general rule. Definitions constituting new entities could be called *real definitions*.<sup>iv</sup> The above mentioned considerations in connection with methodological and real definitions should be noted in the case of other analytical methods.

The next characteristic type of analytical methods is the so-called *reductive analysis*. An analysis should be called reductive when the analysandum could be eliminated from a description by the analysans.

- (6a) Analysis  $\langle \text{analyser} \langle \text{description}_i \langle \dots \text{analysandum} \dots \rangle \rangle$
- (6b) Analysis  $\langle \langle \text{analyser} \langle \text{description}_j \langle \dots \langle \text{analysans}_i, \text{analysans}_j \dots \rangle \rangle \rangle$
- (6c)  $\text{analyser} \langle \text{description}_i \equiv \text{description}_j \rangle$
- (6d)  $\lambda z \lambda y \lambda x \{ \text{ANALYSE} (x(y,z)) \}$
- (6e) The reductive-analyser<sub>Ag</sub> reductive-analyse communication<sub>T</sub> for information processing<sub>P</sub>.
- (6f) AGENT <sub>>dep</sub> TARGET <sub>>dep</sub> PRODUCT
- (6g) /Reductive-analyse/[V] $\lambda x \lambda y \lambda z \lambda s$  [REDUCTIVE-ANALYSE(s) & Agent (z,s) & Target (y,s) & Product (x,s)]

Two important feature of reductive analysis should be mentioned here. First, the real products of analyses of this kind are the *descriptions* from where the analysandum had been eliminated. A reductive analysis affirms that all meaningful descriptions with the analysed analysandum could be (or even must be) alternated by descriptions with the analysant. So a reductive analysis often presupposes that the analysans is somehow more elementary than the analysandum: the analysis-concepts of Carnap, Russell or the early Wittgenstein were certainly of this kind. For example, in the case of 'communication as information processing' a reductive analysis could affirm that the complex expression 'information processing' refers to more elementary entities (or: consists of more elementary concepts) than 'communication', and, basically, all meaningful descriptions containing 'communication' should be alternated with descriptions containing 'information processing' instead of 'communication'. But the term 'elementary' could be interpreted at least two ways. First, it could be interpreted *vertically*, which means that the analysandum *supervenes* on the analysant (as, with some

simplification, organs could be considered as entities supervene on cells which supervene on atoms). Second, it could be interpreted *horizontally*, which means that analysandum is a *complex* of analysans (as a table is a complex of its legs and leaf). But in both cases reductive analysis affirms that the analysandum could be examinable in the terms of the analysans (which statement evokes hard controversies in connection with the limits and fields of many disciplines, for example in the case of the philosophy of mind).

Second, interpreting the symbol of identity ( $\equiv$ )<sup>v</sup> in the case of the formula (6c) raises many problems. It is obvious enough, that, in the case of reductive analysis, the analysans and the analysandum could not be merely synonyms, because the analytic level of the analysans must be more elementary than the analysandum's. So, first of all, (6c) could be interpreted *extensionally*, which means that the *reference* of the analysandum and the reference of the analysans is one and the same (of course, this way of interpretations could lead to serious problems in mathematics and social sciences. Moreover, it's very hard to imagine, that a reference of this kind could be find for 'communication' and 'information processing'). An alternative interpretation could suggest that that formula (6c) should be interpreted *intensionally*, which means that the *meaning* of the analysandum and the meaning of the analysans is one and the same. Here reduction should show that the meaning of the analysandum could be derived from the meaning of the analysans, which means that the concept for the analysandum conceptually depends on the concept for the analysans (and, of course, this interpretation raises all the philosophical questions in connection with 'meaning'. For example, it's hard to maintain the idea that the concept of 'communication' depends (conceptually, logically or even epistemologically) on the concepts of 'information' and 'processing'). And, finally, (6c) could be interpreted *methodologically*, which means that phenomena could be described *as communication* could be exhaustively described *as information processing* - on a more basical level. Methodological interpretations are very popular in social sciences, and, in connection with 'communication as information processing', it does not raise any serious philosophical problem – because of the fact that it seems to be simply false.

But the earlier mentioned presupposition of most reductive analyses - that the analysans is somehow more elementary than the analysandum – is not necessarily prevails. Instead of being more elementary, analysans could be held as a problem-solving appliance. This conception presupposes that the analysandum and the analysans are being able to fill the same cognitive function, while the analysans eliminates some – usually scientific or philosophical – problem which holds with the use of the analysandum. A similar view had been held by Quine (1960) who though that a reductive analysis of this kind is, in fact, not an analysis but a *construction*, where the analyser generates constructions instead of decomposing complex formulas.

A third kind of reductive analysis, namely *explication* (Carnap 1967) could be formalized as follows.

- (7a) Explication  $\langle$ explicator $\langle$ explicandum<sub>i</sub>, explicandum<sub>j</sub> ... explicandum<sub>n</sub> $\rangle$ ;  $\langle$ explicans $\rangle$
- (7b)  $\lambda z \lambda y \lambda x \{ \text{EXPLICATE} (x(y,z)) \}$
- (7c) The explicator<sub>Ag</sub> explicate (conversation and dance and...networking)<sub>T</sub> for communication<sub>p</sub>.
- (7d) AGENT  $>_{\text{dep}}$  TARGET  $>_{\text{dep}}$  PRODUCT

(7e) /Explicate/[V] $\lambda x \lambda y \lambda z \lambda s$  [EXPLICATE(s) & Agent (z,s) & Target (y,s) & Product (x,s)]

In the case of an explication, as it could be seen by the formalism, an explicator usually orders only one analysans for many analysandum. Because of the fact that the direction of an explication is seemingly just the opposite as the direction of analysis (in a narrow sense), which usually orders many analysans for an analysandum, a question may be raised whether explication is an instance of analysis or synthesis, but this question should not be answered here.

As opposed to reductive analyses, a *logical analysis* won't drive the analysis to 'more basical levels' but it tries to brighten the logical structure of the analysandum. In this case the analysans belong to a dictionary of a logical system  $L$ , as in the case of (8).

(8a) Logical analysis  $\langle \text{analyser} \langle \text{description}_i \langle \dots \text{analysandum} \dots \rangle \rangle \rangle$

(8b) Logical analysis  $\langle \langle \text{analyser} \langle \text{description}_j \langle \dots \langle \text{analysans}_i, \text{analysans}_j \dots \rangle \rangle \rangle \rangle \in L_i$

(8c)  $\text{analyser} \langle \text{description}_i \equiv \text{description}_j \rangle$

(8d)  $\lambda z \lambda y \lambda x \{ \text{ANALYSE} (x(y,z)) \}$

(8e) The  $\text{analyser}_{Ag}$  logical-analyse (every communication is a kind of information processing) $_T$  for  $(\forall x Fx \supset Gx)_P$ .

(8f) AGENT  $>_{dep}$  TARGET  $>_{dep}$  PRODUCT

(8g) /Logical-analyse/[V] $\lambda x \lambda y \lambda z \lambda s$  [LOGICAL-ANALYSE(s) & Agent (z,s) & Target (y,s) & Product (x,s)]

Here logical analysis could show that, for example in the case of (6e), if something is affirmed as communication the same thing must be affirmed as information processing. Of course formulas with entailment could not be inverted, so a logical analysis of this kind could not be considered as a class of definition. So the logical description under (8e) would be false for communication in every case when something could be affirmed as communication but the same thing (or event, or action etc) could not be affirmed as information processing. In other cases the entailment will be true. But it's easy to see that (8e) can not be true since there are many examples of communication that do not contain information processing at all (for example in the cases of „fatic” communication).

An additional kind of analysis is the *conceptual analysis* which is concerned with the  $N$  natural (or ordinary) language.

(9a) Conceptual analysis  $\langle \text{analyser} \langle \text{description}_i \langle \dots \text{analysandum} \dots \rangle \rangle \rangle$

(9b) Conceptual analysis  $\langle \langle \text{analyser} \langle \text{description}_j \langle \dots \langle \text{analysans}_i, \text{analysans}_j \dots \rangle \rangle \rangle \rangle \in N$

(9c)  $\text{analyser} \langle \text{description}_i \equiv \text{description}_j \rangle \in N$

(9d)  $\lambda z \lambda y \lambda x \{ \text{CONCEPTUAL ANALYSE} (x(y,z)) \}$

(9e) The  $\text{analyser}_{Ag}$  conceptual-analyse communication $_T$  for information processing $_P$ .

(9f) AGENT  $>_{\text{dep}}$  TARGET  $>_{\text{dep}}$  PRODUCT

(9g) /Conceptual-analyse/[V] $\lambda x \lambda y \lambda z \lambda s$  [CONCEPTUAL-ANALYSE(s) & Agent (z,s) & Target (y,s) & Product (x,s)]

A conceptual analysis usually investigates the logical structure of ordinary language and the so-called normal usage of a given expression which includes the investigation of the conditions by which an expression could or could not be applied for an entity. So a conceptual analysis could serve as a *propedeutics* for a given discipline but, because of its firm binding to the natural language, could not be an instrument for setting it up.

The last kind of analysis should be mentioned here is the so-called *connective analysis* (Strawson 1992) which tries to explain the analysandum and its relations with other concepts without substituting it, which means that in the case of a connective analysis the analysandum could be a part of the analysans.

(10a) Connective analysis  $\langle \text{analyser} \langle \text{description}_i \langle \dots \text{analysandum} \dots \rangle \rangle \rangle$

(10b) Connective analysis  $\langle \text{analyser} \langle \text{description}_j \langle \dots \text{analysandum}, \text{analysans}_i, \text{analysans}_j \dots \rangle \rangle \rangle$

(10c)  $\text{analyser} \langle \text{description}_i \equiv \text{description}_j \rangle$

(10d)  $\lambda z \lambda y \lambda x \{ \text{CONNECTIVE ANALYSE } (x(y,z)) \}$

(10e) The  $\text{analyser}_{\text{Ag}}$  connective-analyse  $\text{communication}_T$  for (communication in relation with information processing) $_P$ .

(10f) AGENT  $>_{\text{dep}}$  TARGET  $>_{\text{dep}}$  PRODUCT

(10g) /Connective-analyse/[V] $\lambda x \lambda y \lambda z \lambda s$  [CONNECTIVE-ANALYSE(s) & Agent (z,s) & Target (y,s) & Product (x,s)]

In short, connective analysis could be considered as a minimum concept of analysis, as Strawson writes: „*Let us abandon the notion of perfect simplicity in concepts; let us abandon even the notion that analysis must always be in the direction of greater simplicity. Let us imagine, instead, the model of an elaborate network, a system, of connected items, concepts, such that the function of each item, each concept, could, from the philosophical point of view, be properly understood only by grasping its connections with the others, its place in the system – perhaps better still, the picture of a set of interlocking systems of such a kind*” (STRAWSON 1992;19)

If conceptual analysis should be considered as a tool for constructing a propedeutics for a given discipline, then connective analysis should be considered as a tool for searching the position of it in connection with other disciplines. So it could be said without oversimplification that conceptual analyses should *proceed*, and connective analyses should *follow* the setting up of a discipline.

### An analysis of the so-called first axiom of human communication

The second part of this discussion would try to apply the method of analysis to a platitudinous statement in connection with communication, namely, that 'one cannot not communicate'.

- (11) One cannot not communicate.

The idea expressed by this statement has been the subject matter of much discussion in recent time, and most communication theorists seem to accept it. The idea is referable with the so-called Palo-Alto school, and, more precisely, with Paul Watzlawick (1967). The question may be raised what Watzlawick meant by it, and it should also be ask what different things could be meant by it. This paper shall not discuss these questions at all, but investigates whether the idea, when understand in a certain way, could be true or not.<sup>vi</sup>

It's obvious at first sight that in the statement (11) the expression 'communicating' falls under an act-category, but it's far more obscure what the reference of 'one' could be. Anyway, the logical structure of (11) could be formalized as follows:

- (11a)  $\langle \forall x \rangle \neg \diamond \neg \langle Fx \rangle$

which means that it's not possible for an x that x is not F, and it could be transformed as (11b) shows;

- (11b)  $\langle \forall x \rangle \Box \langle Fx \rangle$

which means that it's necessary for an x that x is F. So the most broad interpretation of (11) says that everything must communicate, which could be narrowed by the famous Quineian approach as every being must communicate.<sup>vii</sup> As it will be seen, this narrower interpretation still suffers from philosophical problems but, at least, liberates non-existent entities from the compulsion of communication. Since in logic the substantive verb 'to be' could not be handled as a predicate, but as a quantifier, the undermentioned interpretations both have the logical form of (11b).

- (11ba) If x exists, than x must communicate.

- (11bb) If x communicates, than x must exist.

(11ba) says that communication includes<sup>viii</sup> existence, because from (11ba) it follows by *modus tollens* that if x does not communicate it could not exist and by *modus ponens* it is impossible for x that it exists and do not communicate; but when x is non-existent than x is free to communicate or not.<sup>ix</sup> (11bb) rather says that existence includes communication, because from (11bb) it follows by *modus tollens* that if x do not exist it could not communicate and by *modus ponens* it is impossible for x that it exists and do not communicate; but when x does not communicate it is free *to be or not to be*. It could be seen that (11ba) and (11bb) contradict each other because (11bb) allows x to be and not to communicate which is impossible by (11ba). And, because of it, (11bb) contradicts to the statement that one cannot not communicate. But with a Quineian paraphrase (11b) could be interpreted in a third way as follows.

- (11bc) To be is to communicate.



Consider that (11bc) expresses an identity statement<sup>x</sup>; then it seems that the meaning of 'to be' is the same as the meaning of 'to communicate'.<sup>xi</sup> Consider again that (11bc) could be regarded as any kind of analysis from definition to reductive analysis etc. Then the question may be raised: which component of (11bc) is the analysandum, and which one is the analysans? (11bca) and (11bcb) show the difference.

(11bca) Analysis ⟨analyser<sub>i</sub>...;⟨to be...;to communicate⟩⟩

(11bcb) Analysis ⟨analyser<sub>j</sub>...;⟨to communicate...;to be⟩⟩

In the case of the former, the analyser tries to explicate the meaning of existence, while he takes the meaning of communication for granted. In the case of the latter, the analyser tries to explicate the meaning of communication, while he takes the meaning of existence for granted. But in both cases, 'to communicate' entails 'to be' and 'to be' entails 'to communicate', so the logical connective between the concept of communication and the concept of existence is biconditional (iff). It means that, literally, everything that communicates exists, *and* everything that exist communicates. However, this biconditional evokes many problems in both directions that could not be discussed here in details, but two considerations should be proposed. *First*, the statement that which communicates exist seems intuitively true but trivial since it's hard to imagine anything which communicates in spite of the fact that it do not exist or, at least, it must *had been* existed. But the same could be predicated on almost every verb say 'to sit' or 'to see' etc, so this statement is not too informative. *Second*, the statement that which exists communicates seems intuitively problematic since there *are* entities that not communicates in the strict sense of the word 'to communicate', for example, it's hard to say that an armchair or the Milky Way communicates. But this second statement is obviously far more interesting than the first one, since the theological interpretation of communication could corroborate the conception that which exists communicates.<sup>xii</sup> Of course an analysis of this interpretation could not be performed here.

Naturally, the idea behind the statement (11) surely narrows the scope of predication to human agents, which is revealable from the original text of Watzlawick's. Though (11) is the most quoted form of the original idea – which leads, as it was discussed above, to indefensible or, at least, problematic consequences – a refined interpretation of the idea may be proved tenable. Consider the statement expressed by (12).

(12) A human agent cannot not communicate.

The logical form of (12) is:

(12a)  $\langle \forall x \rangle Fx \supset \neg \diamond \neg G \langle x \rangle$ <sup>xiii</sup>

where F signifies the property of being a human agent, and G signifies the property of being in communication. Then (12a) is the logical expression of the proposition that it is impossible for an entity to be a human agent and not to be in communication. This statement is equivalent with (12b)

(12b)  $Fx \supset \Box G \langle x \rangle$ <sup>xiv</sup>

which expresses the proposition that is necessary for an entity that if it is a human agent than it communicates. Both formulas allow not-human-agents to communicate (or not). Since the

argumentation does not stop here, it's important to analyse the whole story before making objections.<sup>xv</sup>

The argumentation, which concludes to the statement that one cannot not communicate could be interpreted as follows.<sup>xvi</sup>

- (12ca) A human agent cannot not behave.
- (12cb) All behaviour in an interactional situation is communication.<sup>xvii</sup>
- (12cc) A human agent cannot not communicate.<sup>xviii</sup>

Now consider the logical structure of the argumentation.

- (12da)  $\langle \forall x \rangle Fx \supset \neg \diamond \neg G \langle x \rangle$
- (12db)  $\langle \forall x \rangle Gx \supset \neg \diamond \neg H \langle x \rangle$
- (12dc)  $\langle \langle \forall x \rangle Fx \supset \neg \diamond \neg G \langle x \rangle \rangle \wedge \langle \langle \forall x \rangle Gx \supset \neg \diamond \neg H \langle x \rangle \rangle \supset \langle \langle \forall x \rangle Fx \supset \neg \diamond \neg H \langle x \rangle \rangle$

which is equivalent with (12ea)-(12ec)

- (12ea)  $\langle \forall x \rangle Fx \supset \Box G \langle x \rangle$
- (12eb)  $\langle \forall x \rangle Gx \supset \Box H \langle x \rangle$
- (12ec)  $\langle \langle \forall x \rangle Fx \supset \Box G \langle x \rangle \rangle \wedge \langle \langle \forall x \rangle Gx \supset \Box H \langle x \rangle \rangle \supset \langle \langle \forall x \rangle Fx \supset \Box H \langle x \rangle \rangle$

which means that if 'to behave' includes 'to be a human agent' and 'to communicate' includes 'to behave' than 'to communicate' includes 'to be a human agent'.<sup>xix</sup> In any way soever, this deduction seems correct, but only if its premisses are acceptable. However, this discussion tries to show that they are deeply problematical.

The first premiss says that a human agent cannot not behave. This statement lies on the presupposition that there is no anti-behavior, or, in other words, behavior has no opposite. But this is nonsense, and argumentation must not have a counter-example to show its absurdity.<sup>xx</sup> Consider *first*, that the application of any expression presupposes a rule by which it is decidable whether it could or could not be predicated for an entity.<sup>xxi</sup> If anything an agent *does* is behaviour, then 'to do' entails 'to behave'; if an agent must (in every occasion) do something, then 'to do' includes 'to be'. But this is not suitable for the normal use of the terms 'to do', 'to behave' and 'to be', nor does it have any reasonable plus for a scientific language. *Second*, if a predicate or property must be stated for every argument in its extension then the application of that predicate or property is *apodictical*, in other words, analytical. It means that the meaning of the predicate is part of the meaning of the argument. So, if human agents must behave (in every occasion) then the meaning of 'to behave' is part of the meaning of 'to be a human agent', which seems to be absurd. And, *finally*, the reason of using a descriptive expression is that it could be *true* or *false*. When, in an observable situation, any state or action should be described as behaviour in any case, then the hypothesis that a human agent cannot not behave could not be falsified. But there is massive

tradition behind the rule that refutability is one of the key requirements for any scientific hypothesis.

The situation is the very same with (12cb) which states that all behaviour in an interactional situation is communication. When it cannot be decided whether a behaviour is communication or not, then either there is no adequate rule for the application of both expressions, namely, 'communication' and 'behaviour' or they are synonyms, which is absurd. Furthermore, the complex expression 'behaviour in an interactional situation' uses an expression, namely *interaction*, which is often used as a synonym for communication in ordinary language. In this latter case (12cb) would not be absurd but trivial.<sup>xxii</sup> And once again, if the question *whether a behaviour in an interactional situation is communication or not* could not be raised, than using *both* expressions has no scientific values in the world.<sup>xxiii</sup> After all, this paper proposes that the incapacibilities derive from accepting the analyzed statement are based on a more fundamental misconception which should be explicated. This misconception derives from confusing communication with the fact, that every act and state *could be considered as communication*. This consideration, however, could be either *true* or *false*.<sup>xxiv</sup> Let us consider a situation which is similar to an example of Watzlawick. An agent A is sitting on a pew with closed eyes, while an agent B tries to setting up hypotheses about A. Here the multifariousness of the hypotheses is the most conspicuous thing, since B could *think* that, for example:

- (13a) A does not want to communicate with B.
- (13b) A likes to be shown mysterious, and he wants to be addressed by B.
- (13c) A is sleeping.
- (13d) A is dead.
- (13e) A is in prayer.

And so on. The question could be raised: in which cases could anybody say that A *communicates* with B? In ordinary language the answer is easy, since only the cases (12a) and (12b) could be considered as communication between A and B, while (13c) and (13d) are not communications at all, and (13e) should be considered as a communication between A and C, namely God. Moreover, the propositions expressed by (13a) and (13b) contradict each other, so (at least) one of them should be false.

Of course objections could be made against this argumentation: one can say (with Watzlawick) that in the case of (13a) A communicates, that he don't want to communicate with B; in the case of (13b) A communicates, that he wants to communicate with B; in the case of (13c) A (or, at least, his body) communicates, that he is sleeping; in the case of (13d) the body of A communicates, that A is dead and in the case of (13e) A communicates with God and *in addition*, communicates to B that he communicates with God. But these objections confuse the mental state of B with the communication between A and B by all odds. This is only the mental capacities of an agent which enables him considering practically anything as communication. What is more, a human agent could consider not just other agent's actions and states *as* communications, but his own mental states as well.<sup>xxv</sup> And the situation is the same with any physical, mental, social or ideal object in the past, in the present and in the future, with actual and with possible, or even impossible ones.<sup>xxvi</sup> Still,

there is an exceptionally odd shade in the statement that A thinks that a round square communicates with him.

So there is a capital difference between the following cases:

(14a) B communicates with A.

(14b) A *thinks*, that B communicates with A.

If there were no difference between the situations expressed by (14a) and (14b) then there are no rules by which the term 'to communicate' can be correctly applied. Where the possibility of delusion cannot be emerged, there can be nothing to judge.

## Conclusion

This discussion tried to show that analysis should play an operative role in consolidating a discipline. But analyses could not be achieved in a conceptual vacuum: they always presuppose a method and some basic concepts that serve as analysans. Moreover, there are many kinds of analyses that have the same logical structure but different presuppositions. This paper tried to explicate some of them. After ascertaining the necessity of analysis, the discussion applied its analytical methods on a so-called axiom of human communication, namely on the one which states that one cannot not communicate. If only an analysis of this kind would had been attempted earlier, then the axiom in question would not be so evident nowadays, because the analysis presented in this paper shows that the axiom is either false or meaningless. But it's evident, that in the process of consolidating a discipline, an imperious misconception could be as beneficial as an appropriate design at times.

## NOTES

<sup>i</sup> For the formalism of thematic roles see, for example, Bornkessel 2006.

<sup>ii</sup> There are many objections against intensional equality in connection with definitions, see Kripke for a classical framing.

<sup>iii</sup> This is Mandelbrot's definition of fractals, see Mandelbrot 1983,15.

<sup>iv</sup> Mathematics is overrun with definitions of this kind, consider for example the definitions of entities like 'number', 'set', or complex ones like 'Triadic Cantor Dust' (See, for example Edgar 2008). The so-called intensional problems with definitions could be illustrated by a seemingly simple example. Consider a definition of '2' as (i).

(i) Definition  $\langle \text{definiator}_{i,\dots}; \langle 2; \langle 1+1 \rangle \rangle$

Of course here 'definition' means the fixation of an equality, but this equality surely cannot be intensional: no body thinks normally that '2' *means* '1+1', and it's easy to see that the number of equality-definitions for '2' is potentially infinite. But the notion that '2' and '1+1' refers to the same *object*, as in the case of extensional equality, seems to be problematic (at least for nominalists). This example represents the main problem with methodological definitions, and arguing for  $\langle \text{communication}; \langle \text{information processing} \rangle \rangle$  is none the worse hard that arguing for  $\langle 2; \langle 1+1 \rangle \rangle$ .

<sup>v</sup> In most cases 'identity' signifies *identification*, which causes serious epistemological problems.

<sup>vi</sup> This method goes back to von Wright's procedure in connection with the Kantian idea of 'Ought entails Can' (WRIGHT 1963).

<sup>vii</sup> Quine's slogan is 'to be is to be the value of a variable', which could narrow the scope of x in the case of (11), see Quine 1953.

<sup>viii</sup> Here 'to include' should be considered as a set-theoretical relation, where the included set is closer than the includer.

<sup>ix</sup> Among others, absurdities of this kind could have been led logicians to forbid using the substantive verb as predicate.

<sup>x</sup> Of course, as it was already mentioned, in logic 'to be' and 'exist' could not be used as a predicate, but in ordinary language substantive verbs are often functioning as predicates. This paper should not discuss on the topic of the so-called logical disfunctions of ordinary languages.

<sup>xi</sup> So identity here should be considered intensionally, because the extensional interpretation of the same statement evokes serious philosophical problems that could not be discussed here.

<sup>xii</sup> See for example Psalm 19: „*The heavens declare the glory of God; the skies proclaim the work of his hands. Day after day they pour forth speech; night after night they reveal knowledge. They have no speech, they use no words; no sound is heard from them. Yet their voice goes out into all the earth, their words to the ends of the world.*”

<sup>xiii</sup> Or  $\langle \forall x \rangle \neg \langle \exists x \rangle (Fx \supset \neg Gx)$

<sup>xiv</sup> Or  $\langle \forall x \rangle \Box \langle Fx \supset Gx \rangle$

<sup>xv</sup> This, naturally, does not mean that (12) could not be criticized *per se*, but in this form the statement seems more contentless than problematic.

<sup>xvi</sup> The basis of this interpretation is the original text of Watzlawick et al (1967), Ch 2, pp 48-51.

<sup>xvii</sup> According to Watzlawick, communication should be conceived as message-units, so communications are the elements of interactions that consist of a finite number of communications (messages).

<sup>xviii</sup> The Wikipedia entry on Watzlawick suggests a more elementary interpretation: „*Every behavior is a kind of communication. Because behavior does not have a counterpart (there is no anti-behavior), it is not possible not to communicate.*” The entry refers to Bateson (1972) in connection with this interpretation.

<sup>xix</sup> This is to say that if to be a human agent entails to behave and to behave entails to communicate than to be a human agent entails to communicate.

<sup>xx</sup> It does not mean that counter-examples could not be easily found. For example no one could reasonably state that a sleeping agent behaves. Watzlawick of course states that a behaviour need not be conscious. Then any observable state of an agent could be conceived as behaviour, which is absurd, because, for example, then a dead agent's observable states should be comprehended as behaviour. Of course in ordinary , and sometimes in scientific languages any corporeal action is called behaviour, for example, the behaviour of subatomic particles in a Wilson-chamber. But then any change could be described as behaviour, which means that the meaning of change and the meaning of behaviour is one and the same, and, according to Occam's razor, a scientific language does not need more expressions than it is necessary.

<sup>xxi</sup> One of the most articulate framing of this logical assumption is from Spencer Brown's Laws of Form:

„*Distinction is perfect continence. That is to say, a distinction is drawn by arranging a boundary with separate sides so that a point on one side cannot reach the other side without crossing the boundary. (...) Once a distinction is drawn, the spaces, states, or contents on each side of the boundary, being distinct, can be indicated. There can be no distinction without motive, and there can be no motive unless contents are seen to differ in value. Thus the calling of the name can be identified with the value of the content.*” (SPENCER-BROWN 1972, p1).

<sup>xxii</sup> Just like the statement that 'Every basilica in Europe is a cathedral'.

<sup>xxiii</sup> Interestingly enough that a German website dedicated to Watzlawick delineates a logically different version of the axiom, which runs as follows: "*Man kann nicht nicht kommunizieren, denn jede Kommunikation (nicht nur mit Worten) ist Verhalten und genauso wie man sich nicht nicht verhalten kann, kann man nicht nicht kommunizieren.*" (Paul Watzlawick Website <http://www.paulwatzlawick.de/axiome.html>). This (unauthentic) interpretation states that all communication is behaviour (instead of the original which states that all behaviour is communication). However, this argumentation is inconclusive because it allows behaviours that is not communications:

(i)  $\langle \forall x \rangle Fx \supset \Box G\langle x \rangle$

(ii)  $\langle \forall x \rangle Hx \supset \Box G\langle x \rangle$

(iii)  $\langle \langle \exists x \rangle \Diamond Gx \supset \neg Fx \rangle$

<sup>xxiv</sup> In many-valued logics there are more than 2 values (true and false), and, for example, in a calculus of Lukasiewicz the number of truth-values could be potentially infinite.

<sup>xxv</sup> There are theories that postulate so-called inner communications, but the question may be raised whether they are communications or not. The author of this paper thinks that inner communications could not be conceived with the concepts of self-reference, because communication could not be reflexive, since the verb 'to communicate' ordinary needs at least two arguments. For example, Steve could not communicate with himself, but his father-role could communicate with his child-role, or his brain could communicate with his retina, and so on. Of course, the analytical level of a person should not be confused with the analytical level of his (psychological or sociological) roles or with the analytical level of his organs etc. The consideration that communications could be described in more than one analytical level is very important here, and the system-theory could be helpful in explicating these questions, see, for example Luhmann 1984.

<sup>xxvi</sup> There are possible world semantics for fictional and impossible worlds as well, see, for example, Dolezel 1998 and Ashline 1995.

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