COMMUNICATION &LANGUAGE at work

Knowledge Communication: Prolegomenon to a Research Programme

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Peter Kastberg, Professor, PhD
Head of the Communicating Organizations Research Group, Department of Culture and Learning
Faculty of Social Sciences and Humanities, Aalborg University, Denmark
Kastberg@ikl.aau.dk

0.   Introductory remarks – instead of an abstract

This paper is a thoroughly revised version of the manuscript of my inaugural professorial lecture delivered on March 16th of 2018, when I was called upon to take up the position as full professor at the department of Culture and Learning, Faculty of Social Sciences and Humanities, University of Aalborg in Denmark. As this is a revised version of a talk given four years ago almost to the date, the reader will probably be able to spot remnants of its oral origins. But not only that. As much of what I envisioned in 2018 has been published one way of the other since then, the reader will also be invited to join me on a text archeological expedition. Much like Norman Mailer's use of (rhetorical) "Time Machines" in his *The Naked and the Dead*, so will I be making extensive use of references and footnotes as rhetorical wormholes allowing the reader to oscillate between 2018 and today, 2022.

This paper is an integration of ideas harvested from over a decade's worth of research publications within the field that I have labelled Knowledge Communication. Basically, my interest in Knowledge Communication grew out of a curiosity as to the conceptual interfaces between communication and knowledge. As a point of entry suffice it to say that – as seen from the helicopter perspective – what sets Knowledge Communication apart from other related fields of communication studies is the fact that it takes its point of departure in the knowledge society. I.e., not in any specific discourse, neither in any one particular knowledge domain, and not even in communication *per se*, but in the context encompassing all of this, i.e., the knowledge society.

Structurally, this paper is divided into four sections. In the first section, I will sketch out my personal *Bildungsweg* and give a brief, narrative account of how my scholarly interests progressed from lexeme to communication. A *Bildungsweg* that eventually gave rise to a perspectivist outlook. In section 2, I will be presenting my take on the formative force of perspective as well as of interruptions of regress. The results, as it were, of applying interruptions of regress to the disciplines that I was socialized into, i.e., Language for Specific Purpose, Public Understanding of Science, and Knowledge Management, allows me to establish the three Cs of the Knowledge Communication research programme, i.e., communication, convergence, and constructivism, respectively. In section 3, I will present, discuss, and evaluate three widely acknowledged understandings of communication. My critical evaluation of existing understandings of what communication 'is' and what it 'does' serves as a stepping-stone for conceptualizing a novel take on communication as co-actional. An understanding of communication that is able to encompass the three Cs. In the final section, section 4, I propose fruitful avenues of research stemming from the Knowledge Communication research programme.

1.   A personal *Bildungsweg*

Even if, in this first section, I may come across as a tad parochial, the ensuing remarks concerning my personal *Bildungsweg* are, in fact, foundational for the research programme that I am about to sketch out.

When I first set out to study modern language and specialized translation studies, I was – academically speaking – socialized into a sort of un-pronounced structuralist version of applied linguistics. I was taught lexicology, grammar, and syntax; later my academic training turned to text linguistics and eventually to genre linguistics. In my years as an early-career scholar my interest in text and genre linguistics was gradually replaced by an interest in communication theory. In hindsight it has become obvious to me that not only was I gradually expanding the ontology of what I was studying, i.e., from lexeme to genre; I was also on a parallel quest to expand my domains of explanation. What I mean by this is that, for me, from the viewpoint of applied linguistics, the word cannot explain itself unaided, it needs a more encompassing setting for that; the sentence cannot explain itself unaided, it, too, needs a more encompassing setting for that and so forth. For me, as an applied linguist, the domain of explanation of the word is sentence, that of the sentence is the text, the context of explanation of the text is the genre and that of the genre is communication. This quest for ever more encompassing domains of explanation led me to see the entities with which I was working much as Matryoshka dolls, i.e., of the – relatively speaking – smaller entity being embedded in the – relatively speaking – larger entity.

Eventually arriving at communication propre as my domain of explanation, I realized, however, as John Donne would have it, that "No man is an island entire of itself" (Donne, 1624), and neither is communication – nor communication theory for that matter. To an applied linguist, just like the word cannot explain itself unaided, so, too, is communication unable to explain itself unaided. But turning to communication also meant that I had to transgress the relatively safe haven of applied linguistics. For, to me, linguistics, however applied they might be, could not form the domain of explanation for the "great blooming, buzzing confusion"[1] that is real-life communication; neither could communication theory *per se* be the theoretical lens through which to describe it. No doubt inspired by the prevailing thoughts of the systems theoreticians that were formative for the kind of sociology (of knowledge) that were adjacent to my own research interests (e.g., Bateson, 1987[1972]), my context of explanation for communication became one of sociology. My point of reference for linking the communicative with the sociological hinges on core ideas put forward by Jürgen Habermas (1995[1981]) and Niklas Luhmann (1987[1984]). Different though these scholars may be in many, many respects, what I take from them is the common denominator that they both converge on, namely the idea that communication is *the* foundational building block of human social life.

Out of this way of looking at my objects of study as well as their interrelations came, *peu à peu*, three general realizations. The first being that it allowed me, for explanatory purposes, to zoom in and out (Nicolini, 2009) at will when studying any specific instance of applied linguistics, any specific instance of communication. The second, which is an abstraction derived from the first, was that I began seeing any instance of applied linguistics – whatever its ontology – as being naturally and formatively suspended in its socio-communicative setting. This, in turn, gradually funneled into the third general realization which was to become my main scholarly interest and drive[2], namely that I would begin to appreciate that being able to observe anything at all is a matter of perspective – no pun intended.

It is *not* so that to the lexicographer syntax, text, and genre are simply not there; it is rather the case that they do not – for disciplinary reasons – merit attention. As seen from the perspective of the lexicographer, the lexeme is the focal point, syntax, text, and genre etc. are peripheral. To the syntactician the sentence is the focal point, lexeme, text, genre etc. are peripheral and so on and so forth. A perspective, then, is not just simply there; it is 'made'. It is a (by-) product of (disciplinary) socialization, it is 'made' by one's interest for looking in the first place alongside with one's perceptual and conceptual interfaces. Intriguingly, this turns perspective into an entity that is, itself, 'made', while at the same it also 'makes' whatever it observes.

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[1] The metaphor is borrowed from William James, of course.

[2] Even if I did transgress my safe haven of applied linguistics and, in doing so, left behind the un-pronounced structuralism of my student years, I admit that the very idea of the embeddedness, of the Matryoshka dolls, is tarnished by the brush of structuralism. Albeit in a way that is testimony to my disposition towards Lakatosian corroborative embraces – and not Kuhnian paradigm shifts (see section 3). In addition, the scholarly interest and drive towards ever expanding contexts of explanation alluded to in section 1 has led me to see philosophy of communication as the current capstone of my domains of explanation. But since that is beside the point that I am trying to make here, I will not be delving deeper into this (see Kastberg, 2020, for elaborations and discussions).

2. Perspectivism and disruption of regress

Returning to the Matryoshka dolls and pondering the above notion of linguistic entities as being suspended in their socio-communicative setting, led me to the conclusion that even though mono-disciplines constitute the core infrastructure – both structurally and intellectually – of the academic landscapes of current universities of a Western persuasion, they are not God-given, unalterable facts. And neither should they be seen as such. Both academic disciplines as well as their boundaries towards other disciplines are, in fact, contingent, *in casu* the results of human design. Wartofsky puts is nicely when he – almost deconstructively – states that

> "Though it may appear that we have arranged our learned disciplines to reflect the way the world is, it is rather the case historically that we have construed the world in the image of our disciplines."
> (Wartofsky, 1997)

So, although lexicology, syntax, genre linguistics etc. are time-honored disciplines and have, needless to say, proven to be highly productive schools of thought, there is – apart from a self-imposed disciplinary fidelity – no reason why we should elevate them to a *doxa* in a Bourdieuian sense. I am, however, not out to deconstruct disciplines, I am merely and rather pragmatically saying that if I have to adhere to a *doxa* it is not a disciplinary one, but one of perspective *per se*. My ur-point of departure when it comes to perspectivism is this quote by Spanish polyhistor José Ortega y Gasset:

> "Perspective is one of the component parts of reality. Far from being a disturbance of its fabric, it is its organizing element. […] Every life is a point of view directed upon the universe. Strictly speaking, what one life sees no other can. [...] Reality happens to be, like a landscape, possessed of an infinite number of perspectives, all equally veracious and authentic. The sole false perspective is that which claims to be the only one there is."
> (Gasset, 1961[1923])

A central feature of what Gasset would recognize and label as 'perspectivism' as early as in the 1920'ies, was later taken up by von Förster's 2nd order cybernetics (e.g., 2003[1973] et passim), the biosocial constructivism of Maturana and Varela (2015[1984]), and Luhmannian systems theory (1987[1984] et passim); namely the crucial recognition that:

> "Everything said is said by an observer to an observer who could be him/herself."
> (Maturana and Varela, 1980: 8)

The point is twofold: (1) that there can be no *locus observandi*, no Archimedean point, no external, God-like point of view from which to 'objectively' see, categorize, analyze and pass judgment from an 'outside'; there are but perspectives. (2) that there can be no perspective without an observer. Whereas the observer, the observing entity, is prototypically a human being, it could also be a social system or, say, an institution (Schöneborn and Blaschke, 2014: 288). No matter the provenience of the observer, however, *what* is observed, and *how* the observed is evaluated etc. is contingent upon the observer, i.e., a conglomerate of the observer's reasons for observing, the observer's predispositions, perceptual and conceptual interfaces, as well as the social intuitions the observer has been socialized into, the structurations the observer is part of constituting, and to which the observer is tied. Whereas this may sound perilously close to agitating for rampant relativism – and the ensuing post-modern paralysis that renders systematic thought nigh impossible – it is not. I will detour slightly to Holocaust survivor Viktor Frankl in order to pave the way for a reining in of what would otherwise turn into a degenerate no-holds-barred subjectivism.

Frankl epitomizes the power of the perspective with this illustration:
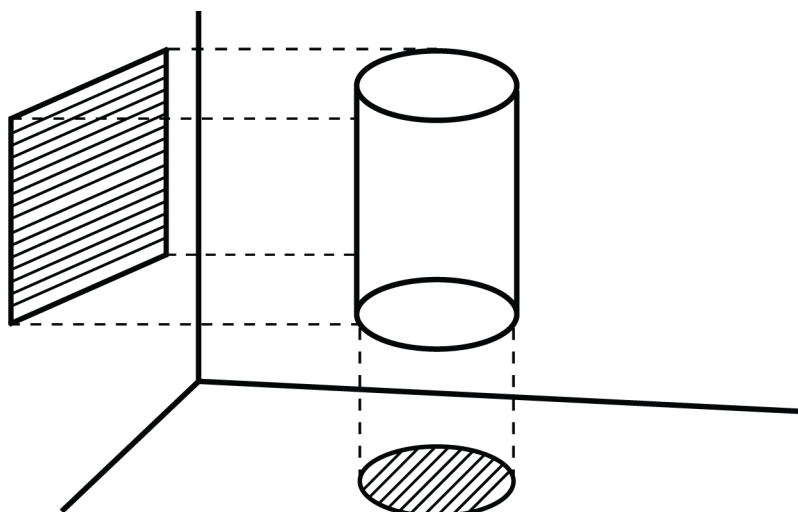
(Figure: 1 Viktor Frankl's perspectivism (1971), drawing by M.P. Ditlevsen)

The cylinder, when looked at from the side, is, in fact, a rectangle; when looked at from the top or the bottom, it is, in fact, a circle. This, by the way, is very akin to Spencer-Brown's *credo* that if you draw a distinction, then a universe comes into being. In other words: the way that *you* observe something, will determine *what* you observe. Although accepting a perspectival *credo* does debunk a traditional notion of 'objectivity', that depends on the (impossible) *locus observandi*, it does, however, not exempt the observer from any and all constraints, neither does it lead to rampant relativism. The constraints imposed on the observer, however, are of a different nature than they would have been, had the observer adhered to traditional 'objectivity'. The constraints take on the form of intersubjective acceptance – or not, of consensus in a setting/an institution/a field/a discussion/a literature – or not. In German there is quite a fitting term for that, namely "Regressunterbrechung" (Schmidt, 2005), i.e., interruption of regress, meaning that contingencies stop at the point where they are no longer warranted or accepted by the relevant community, the relevant discussants, the relevant other observers. Apart from being, at least in my book, an epistemological watershed, this insight was also the philosophical underpinning that, looking back, allowed me to zoom in and zoom out, i.e., to oscillate from lexeme to text and back again for explanatory purposes (cf. section 1). It is also that very insight that, looking forward, allows me to perform the three interruptions of regress that I have deemed formative for the Knowledge Communication research programme.

The perspective that I favor when it comes to Knowledge Communication is that of a Chimera – albeit as a Chimera, metaphorically speaking, Knowledge Communication may be more akin to a prism than a perspective. Nevertheless, this perspectival Chimera of mine is composed of three parts, i.e., the three Cs of communication, convergence, and constructivism; and far from being a random composition, both the three parts and their integration are, in fact, another byproduct of my previously mentioned personal *Bildungsweg* (section 1). Where my path to perspectivism was an epistemological one, the parallel road to the Chimera was a disciplinary one, in as much as the Chimera grew out of the three academic fields that I was socialized into, i.e., Language for Specific Purpose (LSP), Public Understanding of Science (PUS), and Knowledge Management (KM).

2.1   Three interruptions of regress: communication, convergence, and constructivism[3]

LSP

The first academic discipline that I was socialized into was Language for Specific Purposes, or LSP (see Baumann and Kalverkämper (eds.), 2004, for an overview). LSP has been – and still is – formative in developing the field of professional and business communication in (primarily continental) Europe – both as a research discipline and as a university teaching discipline. As the title of the discipline suggests, LSP has always had very strong ties to linguistics. It is therefore no coincidence that the history of ideas of LSP is made up of objects of study stemming from linguistics: From lexis, i.e., terms and terminology (e.g., Wüster, 1966[1931]) over syntax, i.e., sentence structures and preferences (Hoffmann, 1987[1976]) to stylistics (Spillner, 1986), text (Kalverkämper, 1983) and currently genre (Göpferich, 1995). With a growing emphasis on generic features, among which we find the broader

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[3] The presentation of the paths to the three interruptions in section 2.1 and 2.2 draw heavily on Kastberg 2019: 29-54.

social context of LSP, a strong line of research emerged dealing with such features as the accessibility and comprehensibility of LSP texts (e.g., Schüttler, 1994), the cognitive operations involved in producing and understanding them (Baumann, 1996), their mediality (Schröder (ed.), 1993), their ideology (e.g., Fairclough, 1989) etc. In sum, the broad field of pragmatics was called upon to encompass the complexity of these newfound LSP features. To me, this linguistic ontology, expanding though it may be, was, however, a limitation. Not concerning the objects studied, for they are all both relevant and legitimate; but with respect to the ontological perspective itself. For even if the incremental expansion of the linguistic ontology – and hence the objects of study – over the years has gradually allowed LSP to encompass entities of such complexity as genre, LSP is still – *mutatis mutandis* – a text-bound school of thought.

To me it is a non-negotiable point of departure that communication takes place in and by means of semantically meaningful entities, i.e., in texts. What I am advocating, therefore, is *not* that we should abandon the text but rather that we should broaden our scope <u>contextually</u> and not be lured into seeing the text in itself as a kind of 'Rosetta Stone'; a master key or an algorithm with which to decipher all communicative enigmas. The main point being that we cannot allow ourselves to overlook *the* basic issue of text reception – i.e., of semiosis as such –, namely that how a text is understood (if at all) is not only dependent upon text internal or material, linguistic or even generic qualities. What may have a negative or even obstructive influence on text reception and indeed render any text useless – 'good' as it may be – is the extent to which an intended reader (cf. the observer above) is able, willing and ready to take in what it thus conveyed to him or her. With that I turned from text to context and, consequently, to communication propre as my preferred domain of explanation. Communication, consequently, became my first interruption of regress.

PUS

Public Understanding of Science, or PUS, is the second discipline that I was socialized into. PUS is a strand of research devoted to examining the non-expert's exposure to, awareness of, attitudes towards, and understanding of the advances of the specialized knowledges stemming from science, engineering, and technology as well as their implications for society (Knight, 2006). As may be inferred, Public Understanding of Science is a broad field of study. Prolific though its research interests may be, PUS is united under the *credo* that "complex scientific issues are an inherent part of modern societies" and that "subsequently, a basic understanding of these complex issues should be made possible for all individuals living in societies that value and respect their citizens' views" (Brossard and Lewenstein, 2010: 11). In that sense, PUS heralds the "democratic argument for promoting the public understanding of science" (Durant et al., 1989: 14). The formative idea behind PUS research as a disciplinary field, consequently, hinges on the appreciation that the relationship between science and public, prototypically institutionalized as the relationship between the expert and the layperson, is, in many ways, a conflictuous one. Even if what is deemed conflictuous may be seen from a myriad of perspectives (e.g., gender, culture, power, status, 'capital' etc.) the ur-point of departure is the idea that between the expert and layperson there exists a knowledge asymmetry and that this state of (social) affairs in not advantageous to the layperson – and neither to society as a whole. Early PUS research would see the public as being in a knowledge deficit, as a 'gap' that needed to be filled. Often the general public would – at best –, scientifically speaking, be seen as foot-dragging and – at worst – in opposition to an enlightened expert society.

More current PUS research has turned away from this ideology of opposition towards an ideology of convergence. By this I mean that an ideology of opposition is evidently inherent in the so-called deficit model (e.g., expert vs. layperson, expert knowledge vs. lay knowledge etc.), whereas an ideology of convergence is evidently inherent in the call for the democratization of science (e.g., expert and layperson co-produce specialized knowledge). Turning towards an ideology of convergence, consequently, implied a movement towards an ideal of complementarity of the parties involved in communication – i.e., towards an ideal that the expert and layperson in fact complement, and not oppose, one another in the communicative setting. Thus, my second interruption of regress became that of convergence.

KM

Knowledge Management, or KM, constitutes an umbrella term for the study of and, especially, the operationalization of creating, storing, sharing and utilizing knowledge in organizations. According to Wiig (1997) Knowledge Management emerges as a discipline in its own right as late as in the 1980s. In terms of an evolutionary development, the legacy of the early cognitivist idea behind Knowledge Management, i.e., that knowledge is an entity that one can make explicit, easily isolate, somehow package and present in a universal manner that would make it equally accessible to all, has lost some ground in recent years due to the recognition that making something available, e.g., in a database, a book, or a company-wide Content Management System (or intranet), is not the same as making this something understood – let alone to it being perceived in the first place. In spite of this, the lingering *doxa* still holds that knowledge can (somehow) be transferred from A to B, from a person with a knowledge 'surplus' to a person with a knowledge 'deficit'. In sum, knowledge transfer, i.e., "the movement of useful knowledge from one location to another" (Riege, 2007:49) where it may be "re-used" (Parent et al., 2007:84), the outcome of which "manifests itself through changes in

the knowledge or performance of the recipient units" (Argote and Ingramm, 2000:151), is a recurring theme. Not surprisingly, both Knowledge Management literature and practice prototypically hold that knowledge is, in fact, knowledge-as-representation and that it – as such – can be verbalized, codified and stored in, say, organizational documents, videos, memos, and manuals etc. That is, from a knowledge-as-representation point of view, knowledge is to be found in people-external repositories. Based on this perception it follows logically that not only can knowledge-as-representation be transferred *in* documents; it can indeed also be transferred *as* documents, e.g., "presentations and documents […] memos, descriptions, diagrams, manuals" (Kane et al., 2005: 57).

Turning, instead, to a classic constructivist perspective as a domain of explanation, knowledge is neither a matter of one's representation of the world nor the degree to which this representation may or may not correspond to the world. Accordingly, knowledge is not, in a constructivist optic, a context-free, universal representation that would allow an observer to simulate "a knowledge without knowers" (Barth 2002:2). The most important implication of this understanding of knowledge is that knowledge is not equal to its representation in a medium (as would be the case in knowledge-as-representation). On the contrary, the constructivist position holds that knowledge is somehow a product of a knower (von Glasersfeld, 2015[1995]). If we take seriously that knowledge is knowledge-as-construction, and hence "subjective and difficult to formalize" (Foss et al., 2006:7), we must also acknowledge that understanding – or constructing knowledge "requires reconstruction and adaptations at the receiving end" (Szulanski, 2000:11), i.e., by the proverbial 'other'. In sum, from the constructivist perspective, knowledge is basically a matter of a knower collating experiences and integrating these according his or her ability to infer – in effect turning knowledge into the very entity that allows a knower to navigate meaningfully in his or her environment; what von Glasersfeld would refer to a "viability" (2015[1995]). Constructivism, consequently, became my third interruption of regress.

2.2 A transition to a definition of Knowledge Communication

The first interruption of regress took me from text to context or from applied linguistics to communication proper. This interruption of regress allowed me to expand the horizon of my domain of explanation. Lexeme, syntax and text, for instance, are no longer constituting the (quasi-material) boundaries for explanations or evaluations of phenomena of interest. On the contrary, what reigns in Knowledge Communication, what would pose as its explanatory backdrop, is human communicative interaction *per se*. In a sense expanding the horizon from one of language to one of sociology.

The second interruption of regress took me from an ideology of opposition to one of convergence. Towards a way of thinking that regards the proverbial other *not* as the 'target' of one's communication about knowledge, but a co-constructor. Adhering to an ideal that the expert and the layperson in fact complement, and not oppose, one another in the communicative setting in which overcoming a knowledge asymmetry, of securing a knowledge deposit (in a Deweyian sense), is the goal of communication.

The third and last interruption of regress took me from knowledge-as-representation to knowledge-as-construction. Taking seriously that knowledge is the human mental capability to evaluate, to integrate, and to infer based on the internal as well as external stimuli we are exposed to, our previous experiences and our motivation, makes for new and interesting views on how we may communicate *about* knowledge. At a somewhat abstract level this implies that the intuition that what is said is also heard, and what is heard is understood, accepted, and adhered to – which still permeates much of classical educational as well as Knowledge Management thinking – cannot be upheld. At a more mundane level, many a knowledge intensive organization, for instance, would need to recalibrate – or even scrap – traditional knowledge transfer modules embedded in their CMS, along with the corresponding aspects of their Knowledge Management philosophy.

In their integration, the three interruptions of regress make up the formative lenses of Knowledge Communication, and, when translated and molded into a coherent whole, the definition of Knowledge Communication that they give rise to, reads:

> "Knowledge communication is strategic communication. As strategic it is deliberately goal-oriented, the goal being the mediation of understanding across knowledge asymmetries. As communication it is participative (interactive) and the communicative positions converge on the (co)construction of (specialized) knowledge."
> (Based on Kastberg, 2007, et passim)

I will not be going into the definition as such, neither will I elaborate on it here since I have done so at length elsewhere (the most recent being Kastberg, 2018a, and 2018b). What I will be doing instead is to elaborate on what kind of communicative ideology would be able to encompass all three interruptions of regress. Singling out and addressing the communicative ideology, and not other aspects of the definition, boils down to two primary reasons. The first being that Knowledge Communication is, at its very core, a communication discipline. The second being that the Knowledge Communication perspective has given rise to the development of a novel appreciation of what

communication 'is' and what communication 'does'. Especially this second reason is important for the ensuing arguments as both the interruptions of regress as well as the Knowledge Communication definition have made it impossible to uphold the fiction that knowledge is something one can 'send' or 'give' to somebody else who then somehow comes into possession of this knowledge. In order to pave the way for the novel appreciation of communication that is able to live up to the Knowledge Communication definition, I will, however, first be presenting, discussing, and critiquing more traditional appreciations of communication.

3. Knowledge Communication as communicating *about* knowledge[4]

Etymologically, the term communication has Latin origins and is sometimes made to refer to *communicatio* or message. This is often the case in university textbooks focusing on an instrumental view on communication. Where authors have a broader, a more sociological outlook on communication, the term is said to refer to *communis esse* or being together. In the first appreciation, communication is seen as a malleable tool, something to be designed and employed in the service of specific interests. In the latter, it becomes the very medium – evanescent though it may be – in which humans, as social beings, live. To get a handle on something as ubiquitous, pervasive, and yet as amorphous as communication one needs an angle, a perspective, as it were (cf. section 2). The perspective, that I evoke, is that of the history of ideas of modern communication theory[5]. The reading of the history of ideas that I refer to has been elevated to a doxa of the field of communication theory (e.g., as propagated in university textbooks such as Beebe et al., 2004; Windahl et al., 2009; Littlejohn and Foss, 2011; West and Turner, 2018). Here we find a timeline that stipulates that communication theory has undergone a transition of its general formats: From viewing communication as action via viewing communication as interaction to viewing communication as transaction; each of which, in turn, gives rise to a prototypical (Kleiber, 1993) communication model.

Real-life examples of instances of communication as action could be monologues, communication as interaction would add feedback loop (e.g., question-answer sequences after the monologue), whereas communication as transaction would be seen as a cooperative endeavor (e.g., a negotiation between 'sender' and 'receiver' as to the 'meaning' of an instance of communication). Although this timeline seems to depict a straightforward, incremental growth in both complexity and scope of the disciplinary understanding of what communication 'is', a caveat must be issued here. For even if these appreciations of communication, and the models that illustrate them, each may hold a set of distinctive features, they do in fact (also) co-exist and overlap in various ways – in theory as well as in practice. It is, therefore, imperative that they not be perceived of as mutually exclusive or incommensurable in a (crudely rendered) Kuhnian sense (1995[1962]) but rather as evolutionary expansions (Lakatos, 1978) of one another (see Kastberg, 2015a, for further details).

3.1 Communication viewed as action

As action, communication – whatever the modality – is a linear process *from* a sender *to* a receiver (e.g., Theodorson and Theodorson, 1969). Communication-wise, the format is oriented towards the sender, i.e., communication is primarily a matter of sending out messages while trying to avoid "noise" (Shannon and Weaver, 1949).
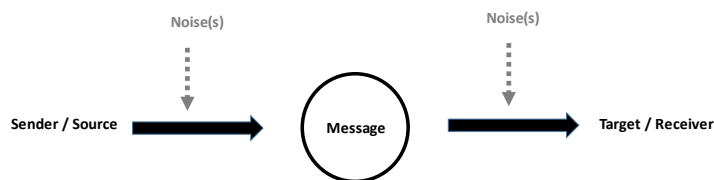
(Figure 2: A rudimentary modelling of communication as action)

Strictly speaking, it is not of primary interest what the receiver may retain from the communication, since, again strictly speaking, it goes without saying that (ideally) the receiver retains what is transmitted. The primary interest, consequently, is that the sender delivers, as it were. This idea corresponds with the idea of the receiver as "the empty vessel" (e.g.,

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[4] This entire section 3 draws heavily on Kastberg, 2020: 29-54.
[5] I take modern communication theory to begin with the seminal work of Shannon and Weaver on the mathematical model of communication (1949).

Feiman-Nemser, Remillard, 1995) or the "recitation model" (e.g., Eisner, 1991) of communication. Formal, monologuous lectures would be examples of this kind of communication. Here everybody in the audience is offered the same kind of stimulus, and in the same way. In terms of retention or "deposit" (Dewey, 1933), however, we have no way of knowing *in situ* what an audience may have learned from such an experience. From the point of view of communication theory, it is imperative that the underlying assumption (be it conscious or unconscious) which reads "that language transfers human thoughts and feelings" (Reddy, 1979: 286) be subject to critique. For, as Reddy elaborates:

> "After all, we do not literally "get thoughts across" when we talk, do we? This sounds like mental telepathy or clairvoyance, and suggests that communication *transfers* thought processes somehow bodily. Actually, no one *receives* anyone else's thoughts directly in their minds when they are using language"
> (Reddy, 1979: 286).[6].

It is rather the case that communication "seems […] to help one person to construct out of his own stock of mental stuff" (op.cit.) knowledge of his/her own. This in turn leads to the communication theoretical insight that *as* action this kind of communication does not elicit interaction, it may, however, elicit re-action. Returning once more to the lecture, applauding (or booing for that matter) is an audience's ritualistic reaction to any lecture; however, applauding *per se* does not mean 'understood', 'accepted' and 'hereafter my actions will comply with what I have just heard'. The applause (or the lack of it) merely gives an indication as to the satisfaction of the audience. Satisfaction concerning how the lecture was delivered, alas, is no guaranty for having understood, accepted, or retained. From the point of view of Knowledge Communication, consequently, this communicative ideology disqualifies itself in as much as it does not allow us to see if knowledge was indeed (co-)constructed. In order to gauge a deposit in the 'other' – or co-construction for that matter –, follow-up activities of an interactive nature, e.g., control questions, quizzes or the like, are required.

3.2 Communication viewed as interaction

In communication theoretical terms, we may conclude that whereas action may be necessary, it is by no means sufficient if the goal is one of ensuring (co-)construction of knowledge. This is also the main reason for why – and this then forms the transition from action to interaction – in real-life communication activities of the action type there is a growing tendency to insert or add an interactive component of sorts. It may be deliberately adding an interactive quality to the talk, for instance in the sense that a talk uploaded to YouTube allows for feedback – albeit sometimes asynchronously – from Internet viewers. Theoretically, then, it becomes a prerequisite for communication viewed and carried out as interaction that it cannot take place merely because a sender has sent, so to speak, but first once a receiver has – in one way or the other – acknowledged being targeted. Or, as Schramm (1954) would probably phrase it, not until some kind of feedback has been detected.
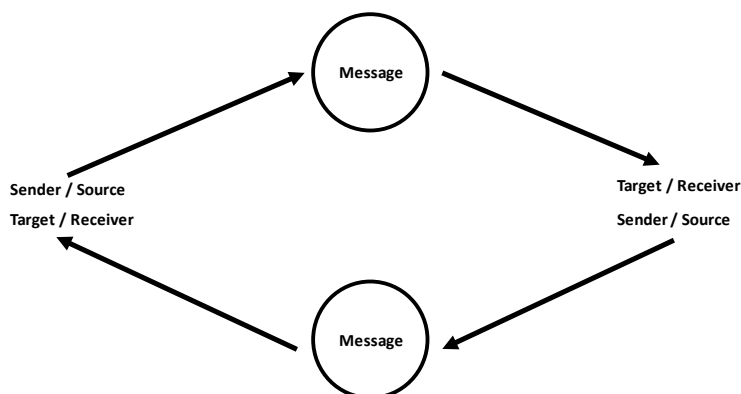
(Figure 3: A rudimentary model of communication as interaction)

Whereas the action model of communication, also sometimes called the transmission model, views communication as a one-way linear process, where A is sending a message to B, the interactional model is still linear, but the linearity is bidirectional. For communication to take place, two messages are involved. And whereas the action model stipulates a fixed constellation of sender and receiver, the interactional model implies role-shifting. There is still an initial message,

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[6] Italics in the original.

which is being sent from sender to receiver, but for interactional communication to take place, the receiver must – in some shape or form – be seen to interact with the message, e.g., be seen to react, to respond. This means that the original receiver becomes the sender of an ensuing communicative exchange, the original sender becomes the receiver – and so on and so forth. In interaction, then, sender and receiver must enter into a mutually recognized relationship of 'agent' and 'reactant' (Anderson and Meyer, 1988: 161).

Compared to the one-way linearity of communication as action, communication as interaction features a bidirectional, asynchronous linearity, a feedback loop of sorts, in which A and B take turns in playing the role of sender and receiver respectively – much as in a game of ping-pong. Noise is also a factor in the interactional model. Apart from acknowledging the 'mechanical' noise that might stem from medium or channel, the interactional model ups the *ante* and sees the sender's and the receiver's respective field of experience as a potential source of noise. In fact, the degree to which understanding a message is possible in the first place is a function of said sender's and receiver's respective field of experience. In line with a very basic semiotic vocabulary, the sender encodes his/her message, whereas the receiver then decodes it. The degree to which the receiver's decoding is 'correct' – i.e., mirrors what was intentionally encoded – is contingent on the extent to which the receiver's field of experience overlaps with that of the sender. The reasoning goes that fields of experience may be too diverse to allow for communication. In contrast to the action model, which does not *per se* allow for gauging the deposit of an instance of communication, the deposit in the receiver resulting from interaction can, however, be appreciated (if not meticulously measured) in the feedback loop itself. The pivotal point being if – or to what extent – the receiver responds to what s/he just heard or experienced in a way that corresponds to what was intended by the sender or in a way that is conform to whatever is sanctioned by any contextual constraints in question.
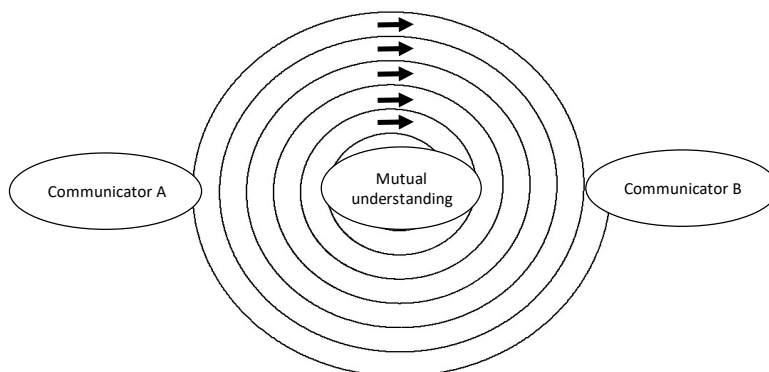
3.3 Communication viewed as transaction

The transactional view on communication (e.g., Barnlund, 2008; Rogers and Kincaid, 1981) is in two important respects quite different from the previous two communicative formats. First of all, when viewing communication as transactional it does not suffice to talk about sending out messages, nor of an asynchronous response to them. Communication viewed as a transactional endeavor is a process in which communicators are simultaneously engaged in the process of sending and receiving messages. This, among other things, entails that the traditional roles of sender and receiver are abandoned in favor of 'communicators'. The transactional model of communication has also abandoned the inherent linearity of messages being sent – be it of a mono- or a bidirectional persuasion – in favor of depicting communication as a spiral. West and Turner put it like this:

> "In the linear model of communication, meaning is sent from one person to another. In the interactional model, meaning is achieved through the feedback of a sender and a receiver. In the transactional model, people build shared meaning."
> (West & Turner, 2018: 12)

Viewing this building of shared meaning as the end point of transactional communication, led Rogers and Kincaid (1981) to eventually propose what still counts as the illustrative capstone of the transactional format and label it "the convergence model of communication":

(Figure 4: A rudimentary model of communication as transaction)

In this model of transactional communication, it is apparent that there are forces at play in communication that exert an almost gravitational pull on the communicators –a pull that seemingly compels them to gravitate towards each other, i.e., to build shared meaning, to reach consensus or mutual understanding. In some university textbooks, this is literally depicted as a Venn diagram, where – set theory-like – the two individual fields of experiences of A and B, respectively, overlap to create a shared field of experience (e.g., West, Turner, 2018). Where the interaction model leans towards pre-Gadamer hermeneutics, the transactional model leans towards the Gadamer version of philosophical hermeneutics in which horizons are fused. The notion of being-together-in-communication paired with the ideal of two, in principle, equal communicators striving for mutual understanding, also paved the way for acknowledging that even though the term of choice is still 'message', the message no longer possesses meaning *a priori*. Neither is meaning a matter of correct decoding. Meaning is something that is assigned to messages by cognizing agents in a process of negotiation. This, needless to say, is in line with the *telos* of communicative action that we find explicated in the writings of Habermas (1995[1981]), as well in Putnam's ideal of the deliberative and participatory democracies of late modern societies of a Western persuasion (Putnam, 2004)[7].

For all its domination-free prowess, however, this model is, in and of itself, a normative ethical statement, and as such, it imposes on communication – as well as on communicators – a non-negotiable incentive for consensus. Whereas few people of a democratic persuasion may want to question what seems to be an altogether comely (political) deal, this ideal is, nevertheless, also laying down the (ethical) law for what constitutes 'good' communication, what 'good' communication ought to be – as well as for its opposite. Empirically speaking, however, consensus may not always be the *a priori* goal of any and all instances of communication. An example: if scientific progress in general and research practices in particular is all about engaging critically with the thoughts of other researchers – and to me it is – then consensus would, quite simply, bar progress. Incidentally, I am quite concerned that consensus, in this normative sense, can also very well turn out to be a mechanism of unobtrusive control (e.g., Bisel et al., 2007). But before I go too much off on a tangent here, I will proceed to identify some steppingstones of a critical nature that lead to my take on a communicative ideology that would cater to the needs of a Knowledge Communication research programme.

3.4 En route to communication viewed as co-actional by way of some critical remarks

When I refer to my take on communication as co-actional, I build on the above presentation of the currently dominating format of transactional communication. In order to infuse into my critique also a productive angle, I take my point of departure in and build upon three insights that I consider overlooked in the extant literature. The first is Dance's modelling of communication as helical (1967), the second is the specific vein of constructivism inherent in the transactional format, the third is the lack of understanding of what I believe to be crucial relational aspects in appreciating communicators.

In his "helix model" of communication (1967[8]), Dance proposes that all present instances of communication should be seen as cumulative, as building on and as being influenced by all past communications. This communicative historicity, however, does not imply neither a verbatim, nor a mechanistic reproduction of the past; it is rather the case that past communications leave traces that rub off on all future communications. What Dance's modelling of communication also shows is that communication is not driven towards consensus. In his illustration, there is no inward pull, no spiraling towards mutual understanding, but rather an outward orientation, an orientation spiraling toward future communications.
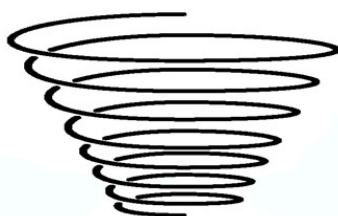
(Figure 5: Dance's helix model of communication)

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[7] As I have dealt extensively with models of communication and their underlying philosophies / ideologies elsewhere, I will refrain from doing so here, but merely point to two relevant papers, i.e., Kastberg, 2015a, and 2015b.
[8] In all likelihood, the underlying idea goes back to George Herbert Mead and the so-called Chicago School of 'symbolic interactionism', of which he was the (posthumous) founder.

Dance sees communication as a dynamic, as an, in principle, never-ending, ever outwards spiraling process, which – in that capacity – features an almost evolutionary trajectory of development. In addition to giving the concept of communication a certain – and in my book: needed – organic plasticity, this also seems to highlight the almost commonsensical notion that whereas mutual understanding might be a laudable goal of communication, it is not a prerequisite for communication, neither for the end of communication, and certainly not for the continuation of communication.

The second critical remark pertains to the formative aspect of the so-called CCO principle, i.e., the most recent offspring of the transactional appreciation of communication. The CCO principle stands for "communication constitutes organization" (e.g., Putnam *et al.*, 2009; Schöneborn & Blaschke, 2014). The CCO principle, in many ways, echoes Bateson's credo that we communicate content as well as relationship. The constitutive force of communication implies that in communication we discursively co-construct not only, say, the identity of communicator A and communicator B – one or both of whom could be an individual or an organization –, communication also constitutes, alters, maintains power and status amongst communicators – as well as the identity, power, status etc. of the ones talked about – be it individuals, organizations or indeed any other entities. Even if the slogan-like statement, that communication constitutes reality, is not meant to mean that communication alone would produce the keyboard on which I am currently writing, or the study in which I sit, in my book the CCO principle is, nevertheless, tarnished by the brush of transubstantiation. Heeding this, one of the champions of the CCO principle therefore also cautiously puts forward this caveat:

> "Advocating a communicative constitution of reality does not amount to falling into some degenerate form of constructivism (or solipsism). It means, on the contrary, that for instance, preoccupations, realities, and situations get expressed and translated in what we say or write."
> (Coreen, 2012, as quoted in Schöneborn & Blaschke, 2014: 303)

What this boils down to, is that the CCO principle is curiously on a par with von Förster, when he – almost half a century ago – said that what we constitute communicatively is not reality *per se*, but exactly those descriptions of reality that our conceptual and perceptual interfaces – as well as our motor skills – would allow us to:

> "I could by no means claim in all seriousness that the lectern, my wrist watch, or the Andromeda Nebula is being computed [*i.e., constructed in an ontological sense*] by me. At the most, one could say that a "description of reality" is computed, because with my verbal references ("lectern", "wristwatch", "Andromeda"), I have just demonstrated that certain sequences of motion of my body combined with certain hissing and grunting sounds, permitted listeners to interpret these as a description."
> (von Förster, 2003[1974]: 232)

In the same critical vein, it worries me that holding that communication constitutes reality – and not, say, descriptions of it – seems to be perilously close to an input-output-logic of a causal, a transmissive nature (cf. section 3.1). There is, alas, no algorithm for human understanding and no communicative panacea for non-compliance. The Austrian zoologist and Nobel Prize Laureate Konrad Lorenz (1903-1989) is said to be the father of this admittedly cynical yet quite astute observation:

> What is thought is not necessarily said
> What is said is not necessarily heard
> What is heard is not necessarily understood
> What is understood is not necessarily accepted
> What is accepted is not necessarily carried out
> What is carried out is not necessarily remembered

The third and last critical remark, before I turn to modelling my co-actional appreciation of communication, pertains to the very core of transactional communication itself, i.e., the apparent easiness with which the built-in drive towards consensus is taken for granted. According to both the transactional and the CCO view of communication, the communicators are engaged in a process of co-constructing mutual understanding of reality and of one another. However, this appreciation of communication does not – to any large extent, at any rate – deal with the relational aspects of communicators apart from stating that the "transactional model […] requires each of them to understand and to incorporate the other's field of experience into his or her life." (West, Turner, 2018: 13). It seems – even if I am being a tad polemic here – that as a byproduct of obtaining mutual understanding, of reaching a shared field of experience, of communicatively constituting a common reality, communicator A is being reduced to a trivialized avatar of communicator B. Needless to say, there is more to the relational aspects of 'ego' and 'alter' than this. In an attempt to approach this 'more', I turn to classical sociology. One of the main claims in the work of Schütz is the appreciation that the 'other' (or

'alter') is – *mutatis mutandis* – like me ('ego') (Schütz, 1976[1969])[9]. While this notion is highly problematic (and for many different reasons), it is, however, not altogether without merit. Even if mirroring the 'other' on oneself may lead to a crude sociological reductionism, intuitively doing so, is nevertheless sensible in order for each and every one of us to be able to navigate in a world populated by an excess of 'others'. Speaking from the standpoint of communication theory, what is important here is that Schütz points to the fact that the 'other' cannot be reduced to a set menu of more or less fixed traits. Instead, we must acknowledge that the complex relational qualities of 'alter' are probably not altogether different from the complex relational qualities of 'ego'.

This, in turn, found its crystallization point in the Parsonian notion of "double contingency" (e.g., Parsons and Shils, 1951: 105 *et passim*). Double contingency is basically an elaboration on the relational phenomenon that when communicating with the 'other', 'ego' recognizes the 'other' and at the same time 'ego' recognizes that the 'other' recognizes 'ego'. What double contingency brings to bear on the understanding of the relationship between communicators is the fact that in the recognition of the 'other' there are expectations of an interactional kind, i.e., 'ego' has expectations towards the 'other' but, at the same time, 'ego' expects that the 'other' has expectations towards 'ego'. Despite its seemingly relational merits, it is obvious that Parsons' double contingency is in line with the interactional appreciation of communication (cf. section 3.2). The 'other' is always seen from the viewpoint of 'ego', and the expectations are always the expectations of 'ego' – also when 'ego' has expectations towards the expectations of 'alter'. Furthermore, whether or not the expectations are met – or to what extent –, is to be established based on the feedback that 'ego' receives. In that sense, the expectations (and the expectations of expectations) become add-ons to the sender's individual field of experience. So, what Parsons' interactional appreciation of communication apparently bars him from seeing is that not merely one communicator, i.e., the sender or 'ego', establishes a double contingency. They both do so – and simultaneously. In effect turning the double contingency into a *double* double contingency (see Kastberg, 2011, for elaborations). In a pre-operative interview, for instance, surgeon and patient alike establish a *double* double contingency of reciprocal expectations. The surgeon expects to be in command of expert clinical knowledge pertaining to the operation at hand, s/he also expects that the patient expects so. At the very same time, the patient, on the other hand, expects the surgeon to be in command of expert clinical knowledge and expects that the surgeon expects that the patient expects so, too, etc. In order to describe exhaustively or indeed to understand the relationship between communicators, one has to abandon the privileged position of 'ego' and take into consideration this *double* double contingency when appreciation and, indeed, when modelling communication.

3.5 Modelling communication viewed as co-actional

Distilling a point of departure from the above presentations, discussions, and evaluations, I am now able to present the modelling of communication that I have labelled co-actional. As is the case for all models, this is a "minimal hypothetical machine […] not for the purpose of implementation, but for the purpose of illustrating ideas" (Fischer, 2014: 370). My minimal hypothetical machine is a rudimentary modelling of the reciprocal dynamics of co-actional communication. I will begin by showing the model, in effect offering it as an anchor to the reader, and then proceed to present and discuss its core elements and their relationships in some detail:
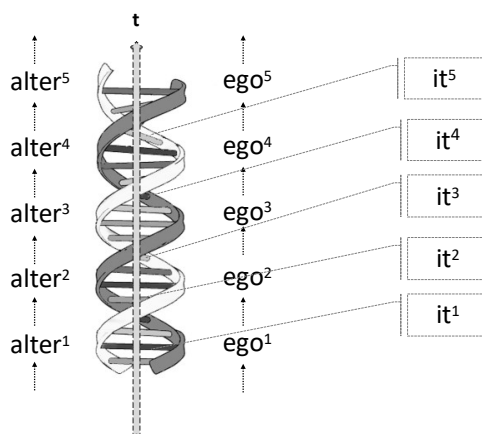
(Figure 6: Kastberg's modelling of the reciprocal dynamics of dialogical communication)

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[9] Naturally, Schütz did qualify this statement; see Schütz, 1976[1969], for further elaborations of this particular concept.

Going ad fontes, so to speak, I stipulate that, at a rudimentary level, any dialogical human-to-human communicative encounter entails two.[10] communicators as well as that, which they converse about. In the words of Danish philosopher Ole Thyssen: I, You, and It, respectively (2016).[11] When it comes to modelling co-actional communication in this sense, I do in fact envision its constitutive factors as two trajectories that in their synthesis form a double helix. That is: A double-stranded, interdependent, spiraling structure in which the strands pivot around the same constant, i.e., t or time (see Kastberg, 2020, for further elaborations). The idea of the double helix of co-actional communication is, of course, a metaphor borrowed from the double helix of the DNA strands (Watson, 1980[1968]). Dwelling for a moment on the basics of DNA, it is well known that certain nucleotides in the strands punctually bind together across the double helix, a binding that is referred to as a base pair. In much the same way, the trajectories of the I and the You of co-actional communication can also be said to be binding punctually by means of the It. This punctual binding of the I and the You by means of the It, however, does not imply that the communicators nor their fields of experiences overlap or even merge – as would be the case in successful transactional communication (cf. section 3.3). That kind of symbiosis, to me, is – for all intents and purposes – a metaphysical idea.

In order to present a co-actional understanding of the It (i.e., what is conversed about, be it knowledge, 'deposit', meaning, understanding etc.), I need to introduce the crucial factor time t that I have inserted into the co-actional model. For in stark contrast to the previously discussed communication models, where time is either taken for granted – and hence not recognized – or time is perceived of as 'anytime' or maybe as 'all the time' – in effect conflating past, present and future, the progressing of time is crucial in the co-actional appreciation of communication. So, instead of taking time for granted, and thus in all probability consciously or unconsciously overlooking this factor, I explicitly view time as a critical factor when it comes to understanding what communication 'is' and what it 'does'. Whereas – for all sorts of analytical purposes – isolating communication in a time-less, an a-temporal model may be legitimate, this take on communication, bars us from seeing the "inseparable relationship between time and meaning" (Tada, 2018: 1). At a very concrete level of observation, the co-actional model depicts that communicators continuously (co- and re-)construct knowledge about something, It, in the course of a dialogue. The model also illustrates that the It, i.e., what is conversed about, be it knowledge, meaning, 'deposit', understanding etc., is not a set menu, a pre-defined goal to be reached by interlocutors, but an entity which, at its core, features plasticity; a plasticity that provisionally congeals – if at all – when, in the flux of communication, interlocutors agree on, say, an interruption of regress (cf. section 2). The illustration also suggest that not only does the It evolve over time, so do the interlocutors. In effect mirroring the idea that a communicator who enters a dialogue is, in many ways, not the same as the communicator that leaves it. Something happens in the course of communication; for one thing learning takes place. Not necessarily formal school-like learnings of an It, e.g., a curriculum, but learnings that also pertain to the You – "did s/he really mean that?" – as well as to the I – "I am now convinced that …" or "I am troubled by …" etc. In the illustration above, this effect of time on all factors involved is depicted by means of elevated numbers, numbers that are meant to symbolize the progressive changes as results of communicative turn-taking. As is obvious, these continuous, evolutionary changes are not only changes pertaining to the It, adhering to the notion of *double* double contingency (cf. section 3.4), the model also illustrates that both the I and the You evolve for as long as communication takes place.

I will end this very short presentation of the co-actional view of communication by pointing to a what I deem to be its most far-reaching conceptual consequence, namely that if "[c]ommunication is not just a peripheral epiphenomenon of human actions but the primary mode of explaining social reality" (Schöneborn and Blaschke, 2014: 302), and from a co-actional point of view I believe that to be the case, then communication is not a 'something' that we enter into. Analogous to Gadamer's claim that we do not enter into the hermeneutic circle, we are already living in it, we are beings-in-communication. But – and this is important – as beings suspended in communication, we are, as we have seen, *not* the deferent reproducers or excavators of pre-established firm and stable knowledge(s) – be it of It, You, or I. Alluding to Wittgensteinian language-game theory, the I and the You are forever suspended in the process of co-producing the co-actional 'game' of communication, and whatever knowledge(s) it may spur, as they play it.

4   A Knowledge Communication research programme and three skeleton questions

By this time, it should be clear that Knowledge Communication cannot be reduced to a question of the 'good' text being 'transmitted' to a 'receiver', nor that the 'receiver' is endowed with a 'knowledge gap' that (merely) needs 'to be filled'. In other words, the Knowledge Communication research programme cannot be limited to linear, transmissive logistics,

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[10] Naturally, there may be – and often are – more than two communicators, but since the number of participants does not *per se* alter the theoretical foundation of this conceptualization, I refrain from widening the scope at this point.
[11] And my guess is that he probably has the trivium from Martin Buber.

i.e., reduced to planning, procuring, transporting, supplying, distributing, and maintaining knowledge. Instead, the Knowledge Communication research programme is characterized by a totally different set of metaphors, namely those of flux and plasticity.[12].

Indeed, as a research programme, Knowledge Communication is agnostic, pragmatic and problem-driven; as such it derives its problems from knowledge-intensive encounters in the knowledge society (Kastberg, 2018b). That is, it does not derive its problems of interest from within the confines of any one disciplinary scope. On the contrary, it derives its problem areas from knowledge-intensive organizational structures, environments, settings, climates, and forums in which communicators may (or indeed: may not) be stimulated to interact with one another in order to appreciate and – if deemed necessary – to overcome knowledge asymmetries.

If I were to translate these foundational insights of what it means to conduct research within the framework of a Knowledge Communication approach into a conglomerate of interrelated research questions, they would need to be written up *not* along the lines of, say, 'what would theory X's response be to problem Y'. Instead, they would need to be framed exploratorily along these lines:

1. What would characterize environments or climates favoring co-actional <u>communication</u>? (E.g., what would a way of organizing look like in which a knowledge-enabling communication climate would emerge and thrive, and how might it be studied and evaluated?)

2. What would characterize practices favoring the <u>convergence</u> of interlocutors on the mediation of understanding across knowledge asymmetries? (E.g., what practices – be they symbolic, discursive, or communicative – may be observed in successful Knowledge Communication settings, and how might they be studied and evaluated?)

3. What would characterize cultures favoring a <u>constructivist</u> appreciation of knowledge? (E.g., what would fertile social and/or organizational, a contextual and/or cultural settings look like that would favor evolutionary, co-construction of knowledge, and how might they be studied and evaluated?)

(Based on Kastberg, 2018a)

What I am envisioning, research-wise, based on the above framing of the Knowledge Communication research programme is a highly explorative research strategy that would allow research to be carried out in such a way as to give rise to a wealth of novel ways of seeing, in the first place, and subsequently of diagnosing and of solving some of the highly complex, theoretical as well as methodological problems emerging in and evolving around the infrastructure of mutual dependencies of organizing, knowing and communicating in the day-to-day lives of knowledge-intensive companies – and, needless to say, evolving around the communicators, i.e., the knowledge workers, who inhabit them.

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[12] As I have dealt with the novel 3rd order disciplinarity of Knowledge Communication at length elsewhere, e.g., Kastberg, 2007, and Kastberg, 2019: 101-111, I will refrain from doing so here again.

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