Procedural Principles of the Erlangen School
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Procedural Principles of the Erlangen School
On the interrelation between the principles of method, of dialogue, and of reason

When scrutinizing the brand of constructivism as developed by the Erlangen School with their founding fathers Paul Lorenzen and Wilhelm Kamlah we are confronted with two different goals quite alike to those that resulted in the bifurcation of Analytical Philosophy into the Logical Empiricism of the Vienna Circle and the Linguistic Phenomenalism of the Oxford School. And Ludwig Wittgenstein may justly be called the god-father to all of them.

There, on the way from Bertrand Russell to Rudolf Carnap, we encounter an attempt to reconstruct wherever possible the conceptual frame of mathematics and the sciences in a logically sound manner by using ordinary language as a starting point, and, on the way from George Edward Moore to Gilbert Ryle, we experience an attempt to reinterpret wherever possible the conceptual content of traditional philosophy by means of the same ordinary language. The goal to construct a language of science – or rather its logical structure, an ›ideal‹ language – on the basis of a well functioning area of language, i.e., ordinary language, by using the tool of formal languages contrasts with the goal to reduce the language of philosophy to ordinary language. The latter goal of bringing words back ›from their metaphysical to their everyday use‹, as Wittgenstein once stated,\(^1\) is better understood as the goal to lay bare the hidden ›implication threads‹ between concepts,\(^2\) especially of those that derive from traditional philosophy when used in ordinary language argumentations. With other words, a non-formal logic of language should be exhibited that at present, in an explicit pragmatic fashion, has found an elaborate version in Robert Brandom’s inferentialism.\(^3\)

For both branches of Analytical Philosophy logical analysis of language as extracted from Gottlob Freges foundation of modern formal logic was the primary tool. This is true for the constructivism of the Erlangen School, as well. With respect to the general recognition it had gained from the philosophical public, even the peculiar predominance of the concern with constructions in Logical Empiricism over the concern in Linguistic Phenomenalism with philosophical tradition and its impact on how common affairs are treated or maltreated, found a repetition. When speaking of the Erlangen School primarily the reconstructions of scientific areas and others beyond science proper, are focussed – the primary concern of Lorenzen – and not the studies on the anthropological background of how it all came about, both historically and systematically, something Kamlah was mainly interested in.

\(^{1}\) \textit{PU}, § 116.
Nevertheless, both agreed fully on how and where to start the whole enterprise: amidst and with the use of ordinary language, provided non-stock use of it is excluded. Several times, with approval Lorenzen referred back to a famous simile on how science is built up that Otto Neurath had used at the end of his essay on *The Foundations of the Social Sciences* for the International Encyclopedia of Unified Science: 4

> „Imagine sailors who, far out at sea, transform the shape of their clumsy vessel from a more circular to a more fishlike one. They make use of some drifting timber, besides the timber of the old structure, to modify the skeleton and the hull of their vessel. But they cannot put the ship in dock in order to start from scratch. During their work they stay on the old structure and deal with heavy gales and thundering waves. In transforming their ship they take care that dangerous leakages do not occur. A new ship grows out of the old one, step by step – and while they are still building, the sailors may already be thinking of a new structure, and they will not always agree with one another. The whole business will go on in a way we cannot even anticipate today. That is our fate."

And Lorenzen added: Even the first ship must have been built while in the beginning men were living on the high seas, just swimming and putting one’s trust into the various elementary skills of those swimming about that the skills will be sufficient to turn solid items floating around into parts of, let’s say, a primitive raft – there is no dry-dock. The ordinary language we happen to use successfully must, for scientific purposes, gradually be substituted by interlinguistic constructions in order really to achieve such purposes. An important example: our number system for doing arithmetic. It is, meanwhile, completely established interlinguistically.

As starting point of the various scientific fields, Lorenzen propagated the set-up of an ortho-language quite akin to the outcome of what Willard V.O. Quine had called the ›regimentation‹ of ordinary language. 5 And a principle of method must govern any such set-up as without an ordering, semi-ordering to be precise, that is to be imposed on the various steps leading to a well-functioning language, a guarantee against errors cannot be given – that was the idea. But it was an idea that did not gain currency among all those who affiliated themselves with the Erlangen School. For the simple reason that the goal of a language of science being set up without gaps and vicious circles such that both syntax and semantics can be derived from its pragmatics is not and, most probably, cannot, be determined in such a fashion that possible sequences of steps may in advance be judged as being in accordance with a principle of method or not.

Methodical order is different from pragmational order that gave birth to the idea in the strict sense just stated, because pragmational order just cannot be violated: you cannot run down from the top of a hill, before having gone up to the top provided you are not yet standing on the top. On the language level, things are not as easy. Why, for example, should it be a violation of methodical order – pragmatically there is no obstacle – , if a proposition about some object may be used to define the object instead of having the existence of an object guaranteed prior to any proposition about it? In this case, obviously, the endless discussion on predicativity is lurking in the shadow.

4 Neurath 1970, p 47.
5 Cf. Lorenzen/Schwemmer 1973, and Quine 1960, chap. V; cf. , furthermore, Wohlrapp 1975, for a likewise relevant discussion on the relation between the principle of method and a principle of dialogue that is somewhat restricted in scope when compared with the exposition here.
Where, then, is a principle of method applicable and when should it be applied? As a preliminary answer that will serve the present purpose, we may say that for turning a (subject-bound) skill into a (generally available) knowing-how we need a method of teaching and learning skills. An articulation of such a procedure is known as procedural knowledge or practical knowledge (provided normative connotations – knowing how to act under given conditions – do not interfere with the term ‘practical’ in this case). And a very simple fine example is at hand, the skill of counting transferred into the notation of how to generate the positive natural numbers by concatenating units: the arithmetical calculus of strokes. Of course, not the sequences of strokes themselves are the natural numbers. In a semiotically purified version of presenting the notation of counting, it is the generation of indices (showing the positive natural numbers) that is articulated by the arithmetical calculus of strokes.

With systems of rules for the construction of all kinds of objects on various logical levels – semiotically these objects have generally to be treated as indices of the ›real‹ objects (in fact, ›real‹ objects as something that we can refer to, depend on activities to make them available, i.e., depend on dealing with them) – the principle of method is identified as a way to arrive at generally available procedural knowledge. How to understand procedures rather than just being able to repeat them, seemed not to be a problem to be dealt with separately, in the early phase of the Erlangen School, even though the question of what it means to understand what others do or say has always been raised especially by Kamlah. Lorenzen did not recognize this to be a question beyond mere psychological interest, and he felt himself supported by the fact that the principle of method is itself obeying a more general principle of the Erlangen School, a principle that has variously been called ‘the principle of transsubjectivity’ (try to overcome your subjectivity), ‘the principle of reasonable arguing’ (try to argue unprejudiced, unconstrained and unpersuadingly) or, even, ‘the principle of reason’. In its first version as a call for overcoming one's subjectivity, it seemed explicitly to relegate questions of mere understanding to be something that has to be answered individually before even being able to participate in the constructivist version of ›a rational reconstruction of scientific knowledge‹ – a phrase Rudolf Carnap once used to characterize the goal of Logical Empiricism.6

Usually, the most important objects to be constructed are the true propositions (for simplicity's sake I delete here a discussion of the principles as governing the way of how to set up practical philosophy according to the tenets of the Erlangen School), and the rules to reach them are rules of argumentation. As these cannot look like the rules for constructing objects, because at least two persons are involved and the steps on the way are not parts of true propositions but arguments pro and con the initial proposition, the term ‘principle of method’ eventually lost its primary position as a general characteristic of the philosophical work in the Erlangen School. Yet, we should not forget that initially it was indeed the insistence of proceeding methodically in the general sense of proceeding according to principles – and not by trial and error, because the concern is with science as a way of presentation and not with science as a way of research –, in order to guarantee that a reader (or listener) is in a position to follow on his own the procedure to reach the presented results (rather

6 Cf. Carnap 1961, p IX.
than 'to believe' them) that served as the self-characterization of the Erlangen School.

When the plea to overcome one's subjectivity assumed logical priority among the guiding principles – and this was signalled by the label ‘principle of reason’ – we should read this ambitious term as a way to make the conviction explicit that binds the Erlangen School to Kant, when he declares that „die Vernunft nur das einsieht, was sie selbst nach ihrem Entwurfe hervorbringt“. The new label is also better suited, because it does not suggest preconceived limits of how to achieve the goal of transsubjectivity, whether rules of construction will be adequate or not. As a matter of fact, the inherent limits of rules of construction were felt, when questions of dealing with moral issues and other topics of practical philosophy came up, whereas the importance to transcend subjectivity in normative contexts in order to make general participation in moral discourse possible, was strengthened.

If following a principle of method is, indeed, to be identified with mediating successfully procedural knowledge, the question had to be answered, whether the command of a language, especially one that is rich enough to do science and philosophy, may properly be understood as being just a case of procedural knowledge, too. Certainly not in the simple sense of an ability to follow rules of construction – we noted that, already. The essential difference between the ability to say something (to someone) and the ability to understand something (that someone has said) including an explication of how to make sure that something said has been understood cannot be dealt with by just rules of construction. Here, we have found the deeper reason why it was important to move from a principle of method to the more general principle of transsubjectivity. And, furthermore, why it is essential not to relegate questions of understanding, e.g., understanding constructions, to mere preconditions of reconstructing scientific knowledge. It makes it clear that any move towards sound science and philosophy will initially be a move by an individual subject, and whether that works, is dependent on how to make such a move accessible to potentially everybody.

Here, now, the Erlangen School faces a problem that is basically the same the Logical Empiricists tried to tackle with: the seemingly private starting point. It makes no difference whether we start with individual activities that others might not be able to understand or with individual sense data that seem to be inaccessible to others. To postulate a common world of objects (of different categories) and a common way to live within it, the world of everyday life, is certainly not a way out, because we have to deal with the first steps out of such a shared world towards, e.g., constructing a language of science, or, e.g., understanding traditional language.

Expressed in a radical fashion: How can I know that my object is also your object? And if indeed I would know that: How is, under whatever circumstances, what I say about some object 'the same', i.e., has the same meaning, as what you say about the same object? Don't we rather live in a virtual reality where all the others are but mere projections in each one's individual world? The question turned upside down: How is it possible to share individual experiences and thus to create a common world step by step? The answer of the Erlangen school (after having learnt their lessons from Wittgenstein and Peirce): By two persons acquiring a common action competence in a situation of teaching and learning, i.e., through repetition and imitation of performing an action. Of course, this is just a first step, as
transsubjectivity is enforced in a two-person-world, only. And this is effected not by transferring an individual competence from one person to another one, but by using a procedure that incorporates from the very beginning the two dialogical roles inherent in any action, be it a simple action, or, later on, a sign action, e.g., a verbal one: the I-role or role of the agent in executing an action (it means: producing an action token, category of doing) and the You-role or role of the patient in executing an action (it means: witnessing the action type that is instantiated by the action token, category of suffering). It needs further steps to enlarge the common two-person-world in order to reach an essentially transsubjective world.

I should hasten now to introduce an essential distinction connected with the concept of an action that was payed attention to not before the difference of the two dialogical roles of any action — and, hence, the principle of dialogue on an elementary level — was understood as keeping the process of overcoming one's subjectivity going. It is the distinction of object and procedure — called ›objet et opération‹ by Gilles Granger,7 ›matter and manner‹ by Nelson Goodman8 — that are bound together by duality, when procedures (like functions) are themselves treated as objects of another realm that make objects of the first realm accessible (quite alike the duality of objectival fermions and force-mediating bosons in nuclear physics). Yet, the essential point is to look for the distinction of object and procedures when procedures are not treated as objects of another kind. In fact, it is actions that, different from any other kind of objects, show beside their objectival character also a functional character, where the term 'functional character' does not refer to the possibility of treating actions as a means for some end — this happens without erasing the objectival character. It, rather, refers to the fact that while executing an action, i.e., while producing an action token together with witnessing an action-type, neither before nor after, any reference to the action, be it concretely to the token or abstractly to the type, is suspended — and that is meant when saying that the functional character comes to the fore and the objectival character has disappeared. While executing an action, actor and execution are said to be ›melted‹, i.e., in logical terms, indistinguishable.

Functionally, an action shows a dialogic polarity. Any execution of an action is an active performance by the actor in the role of agent, i.e., I-role, and it is a passive cognition of the actor in the role of patient, i.e., You-role. I, already, mentioned the old Aristotelian categories of ποιεῖν and πάσχειν that were taken up again as doing and suffering by Dewey.9 The functional polarity of active performance and passive cognition on the one hand, and the objectival opposition of producing empirical tokens, i.e., individual actions, and witnessing rational types, i.e., generic acts, on the other hand — in the first case we speak of singular actualizations of universal schemata, in the second case of particular instantiations of rational types —, both have carefully to be kept distinct from the duality between object (action as an object) and procedure (action as a procedure or function). Phrased a bit more drastically: tokens and types are objects, actualizations and schemata are procedures that we need to make objects accessible through ways of dealing with them.

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9 Dewey 1921, p 86.
It is these procedures – a *phenomenological reduction* of a world of objects that is found, as I have called it – which, if procedurally turned upside down, appear as a *dialogical construction* of a world of objects that is made. And such a dialogical construction acts as an ›ideal‹ measuring rod for the ›real‹ world we started from. In this sense we are justified to call the two procedures – on the one hand, of actualizing an action of dealing with an object, i.e., an appropriation of the object, and, on the other hand, of schematizing an action of dealing with an object, i.e., a detachment from the object – being a pragmatization through appropriation in taking the I-role, and being a semiotization through detachment in taking the You-role, in a seemingly old-fashioned way to be exercising practical and theoretical rationality, respectively.

By now, I hope, it needs no further argument for being convinced that the principle of dialogue – beware of the two different dialogical roles of each and every action – actually serves to validate the principle of transsubjectivity, and that in this sense, too, it deserves likewise to be called the principle of reason. Reason is dialogical in nature, even beyond actions of argumentation where this thesis has found a broad treatment among adherents of the Erlangen school.\(^\text{10}\) Besides, if the principle of method governs the mediation of procedural knowledge using rules of construction of objects, something that belongs to the essential achievements of practical rationality, we should likewise identify the essential achievements of theoretical rationality, namely the mediation of propositional knowledge, to be governed by another principle. For, we know, already, that the principle of method pertaining to the role of agent, will not be appropriate to govern the mediation of propositional knowledge as this pertains to the role of patient. The necessity of a principle of conceptualization in charge of guaranteeing a conceptual organization of propositional knowledge in order to make its mediation possible has not yet been envisaged by the Erlangen School, possibly because such steps were thought to have been covered by the principle of transsubjectivity, already. Indeed, mediation of propositional knowledge proceeds with rules of substitution of signs as the means of conceptual organization – you will understand what I have said, when ›my‹ language can be translated into ›your‹ language. Hence, rules of substitution of signs may properly be called rules of translation, because the term ‘substitution’ covers only the syntactical aspect of a conceptual organization. With rules of translation of signs we complement the rules of construction of objects; both should be clearly distinguished from each other.

Now, both a methodically produced knowing-how and a conceptually organized knowing-that are still in need of making them ready to be at one’s disposal, a knowing-how needs stabilization and a knowing-that needs objectivation. The dialogic procedures for having that done are available. By *detachment* from a knowing-how (using the You-Role) this knowing-how is stabilized in terms of a piece of symptomatic perceptual knowledge – someone *knows* what he/she is able to do and that he/she is likewise able to share it in principle with anybody by means of a process of teaching and learning. And by *appropriation* of a knowing-that (using the I-role) this knowing-that is objectified in terms of a piece of symbolic procedural knowledge – someone is able to say what he/she knows and is furthermore able to defend what he/she knows against potentially anybody by argumentation.

\(^{10}\) Recently, e.g., in Wohlrapp 2008.
The principle of dialogue in governing the procedures that lead to a transsubjective reconstruction of experience, of both individually acquiring an experience and socially partaking of an experience by articulating the former, guarantees the satisfaction of the principle of transsubjectivity. The two principles, the one of method for the procedures on the level of objects by rules of construction, and the one of conceptualization for the procedures on the level of signs/language by rules of translation, will serve their purpose, if they are treated as subordinate to the principle of dialogue.

When rendering the principles of the Erlangen School in the way just explained we can enlarge the initial perspective of treating the Lorenzen-branch of the Erlangen school as an heir of Carnap's programme – the corresponding relation of the Kamlah-branch of the Erlangen School to Ryle's intentions is out of focus, then – to a broad perspective of treating Dialogical Philosophy as an outcome of combining the basic strategies of Ludwig Wittgenstein and Martin Buber. On the one hand, I am referring to Wittgenstein's reduction of sign acting to merely acting that has the consequence of treating witnessing of one's own being active as a case of turning an action into a verbal action, though this is nothing but a change of the I-role into the You-role on the level of simple actions. If, on the other hand, an arbitrary action is pushed up to the level of sign actions, as done by Buber, doing and suffering lose their distinctive feature from saying (something) and understanding (what has been said). In the later Wittgenstein we are faced with a reduction of theory to praxis – a case of an execution of the programme of »naturalizing« the mental. In Buber we find a theorization of praxis, and this is a case of the complementary strategy of executing the programme of »mentalizing« the natural. Both procedures, though explicitly dialogical with respect to object and procedure, are obviously one-sided.

Dialogical Philosophy in the full sense of developing the dialogical character of reason on the practical level of simple actions and on the theoretical level of sign actions may indeed be understood as an attempt to find a common framework for the strategies of both Wittgenstein and Buber. In my version of explicating the basic intentions of the Erlangen School in a historical perspective, they should be summed up as searching for a combination of the programme of naturalizing language which comes about by radicalizing the naturalized epistemology of Quine, if you disregard for a moment the dialogical set-up, with the programme of mentalizing world which, in fact, is what Cassirer did in his Philosophie der symbolischen Formen; here, too, without having used a dialogical framework explicitly.\footnote{Cf. Quine 1960;1969, and Cassirer 1923-29.}

You have just to pay attention to the pragmatic character of signs and to the semiotic character of actions. The pragmatic character of signs comes to the fore by embedding signs in the domain of sign actions, and actions may acquire semiotic functions when used, for example, in situations of learning by doing. If this much is granted, the interplay of detachment and appropriation as the basic forms of theoretical and practical rationality, as explained, already, solves the problem of how naturalization and mentalization may be combined.

In fact, naturalizing language appears as pragmatization when we are engaged in the procedure of appropriation, and, correspondingly, we experience mentalizing world as semiotization when we take up the procedure of detachment. Simplifications
together with the conceptual troubles they generate when elaborating on the interplay of pragmatization and semiotization, we can evade by carefully attending to the two dialogical roles in both acting and sign acting, something neither Wittgenstein nor Buber could do, because within their respective frameworks they couldn't but miss the chance of balancing pragmatization by semiotization and vice versa.

What happens within the procedure of appropriation is not just a transfer of, e.g., language into verbal activity as the programme of naturalization seems to demand. Appropriation means to take on I-role, and for verbal actions this is a double task. You produce an act of speaking simply as a sequence of sounds/phonemes, and, at the same time, you produce an act of meaningful speaking, i.e., saying (something); for simple actions appropriation is just doing them. Correspondingly, detachment is not exhausted by the transfer of, e.g., the world of particulars into meaningful actions of dealing with them so as to ›understand‹ the world or to induce understanding – you may think, e.g., of ›understanding‹ a musical instrument as a particular, by the activity of playing it. Rather, detachment means to take on You-role, and, again, for simple actions this is just a case of suffering them, whereas for verbal actions detachment consists in both hearing a sequence of sounds and, at the same time, meaningful listening that is called ‘understanding’.

Of course, Dialogical Philosophy is certainly not by itself an interplay of the two procedures appropriation and detachment, it is a representation of it, hence, a detachment of second order logically. It all depends on being able to pay attention to the two dialogical roles and their difference when dealing with all four kinds of activities: addressing somebody and answering somebody, acting and reacting. To react to an action would be impossible, if it were unknown to the reacting person what it was the acting person had done; likewise, an answer would not count as an answer, if not some at least slight knowledge of what the other has said, preceded the answer.

Within each activity, be it an ordinary action or a sign action, e.g., a verbal activity, the I-role appears, as we know, already, as an actualization of the action – it may be called the pragmatic side of it – whereas the You-role appears as a schematization of it that counts as its semiotic side. Any agent, when performing an action, is also in possession of an ›image‹ of his/her action (›he/she sees himself acting‹), and, likewise, any speaker who says something, i.e., who is speaking meaningfully, is, when doing so, also in possession of what he/she means (you may say: ›he/she acts as his own listener‹). If we forget about this, we would make it impossible even to articulate the unavoidable difference of understanding between agent and patient. Yet, being fully conscious of it, such differences of understanding can be transformed into processes of learning from each other and this is nothing but a sequence of further dialogues in the general sense of not being restricted to verbal exchanges.

Now, application of the principle of reason – the dialogical character of reason turns the principle of reason into an equivalent of the principle of dialogue – to the process of learning from each other yields the transformation of the interplay of appropriation and detachment from its status as a second order detachment into such an interplay in real life, that is, a transformation of dialogical philosophy into the ›vécu‹ or an appropriation of second order. What happens in real life, is mutual self-education, on the one hand, by developing the art of taking over the perspective of the other side, a case of appropriation of the agent-patient-relation, and, on the other hand, by
learning to see yourself with the eyes of the other, a case of detachment from the agent-patient-relation. This includes learning to acquire skills of the other as part of your own ones, and to look at your own skills with the eyes of the other. In this way, both individuation and socialization of both sides will be enhanced. A change of the ways of life and of the world views is not only occurring as done and suffered, but happens consciously.

Appropriation of the agent-patient-relation by the agent, the case of self-appropriation, leads to an internalization of the You-role: the agent besides displaying the I-role takes on an I-and-You-role. The real partner of an actor as agent is turned into a virtual one. We are all quite well acquainted with situations of this kind. We, often, know in advance what someone is going to say to what I will be doing, or what he is going to answer to what I will be saying. In scientific discourse it is even one’s duty to answer in advance objections that might conceivably be raised rather than to wait for actual objections. Yet, when the ability to react to a real partner gets lost, we are faced with a real problem: self-appropriation develops into self-sufficiency.

Correspondingly, detachment from the agent-patient-relation by the patient, the case of self-detachment, leads to an externalization of the You-role: the patient besides displaying the You-role takes on an He/She-role. The real partner of an actor is turned into merely a special kind of object. Again, we are well acquainted with this situation, too. For example, when treating men as objects of scientific investigations, both in the natural and in the social sciences. And, again, when the ability to meet someone as a person rather than to see him only in He/She-role, gets lost, we have a problem: self-detachment develops into self-alienation. Somebody who avails himself/herself of both I-role and I-and-You-role should be called a subject in the first person, and his or her co-subject in an interaction of any kind has to be considered as somebody who takes on both He/She-role and You-role and may be called a subject in the third person. This applies also to the case, where the co-subject is the same person as the subject. We, then, speak of a subject who knows to be one: he or she is a self-conscious subject.

It is not difficult to see, how these last remarks that gave hints on consequences of the principle of dialogue or reason with respect to further differentiations of the two dialogical roles, open the path to practical philosophy as conceived in the Erlangen School. Yet, to enter this area would make another paper necessary.
References


