

Some Ideas towards a Non-dualism-Compatible Theory of Science

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> Purpose • The paper tries to explore the possibility of developing a theory of science that is compatible with the non-dualizing way of speaking. **> Problem** • The difficulty of developing a non-dualism-compatible theory of science consists in the difference of the perspectives of the theory of science and the non-dualizing way of speaking. The non-dualizing way of speaking deals with descriptions as results of inquiries, whereas science theory thematizes the process of gaining descriptions in empirical research. If we want to reach compatibility between these different perspectives, we are led to the question of what kind of relationship exists between inquiry and description and what is the source of attaining knowledge. In respect of social sciences, there is the additional problem that a great deal of their objects are text; therefore the relationship between text and interpretation is relevant for the empirical research process of social sciences. **> Findings** • George Herbert Mead's theory of action and communication allows a productive approach to the above-mentioned problem to be found. Mead conceives of speaking as potential acting, as action that is initiated but not carried out. In this way, describing and inquiring can be connected non-dualistically. The source of gaining knowledge and descriptions is, however, according to Mead's action theory, practical activities. Objects are not presupposed, but are results from action. New experiences and descriptions come from inquiries that are stimulated by action problems and action inhibition and the endeavor to overcome the inhibition. **> Implications** • The result of the argumentation is that Mead's conception of action and language can serve to develop a theory of science that is compatible with non-dualizing thinking. The reason for this is that in Mead's conception, acting and speaking, experiencing and describing are not conceived of as categorical differences but are related to each other as executed and initiated. **> Key words** • Pragmatist action, communication theory, Mead, research, discourse.

Introduction

Ultimately, Josef Mitterer's critique of truth claims comes to say that the participants of discourses presuppose, ex-post, their own descriptions as the language-different object and use them as the touchstone of truth and error of other descriptions. The context of Mitterer's critical analysis is the discourse, where various descriptions that have been provided face each other. However, following scientific discussions, we can see that the participants of discourses not only set their descriptions against those of others but also justify them as results of empirical research and theoretical constructions.¹ They not only discuss the results of

research but also the process of research, its methods, the data, and the possibilities of their interpretation.

The reference to the process of empirical research in discussions does not alter the dualistic procedure of how truth is claimed. That is to say that the descriptions of objects that have been created in the research process are presupposed, ex-post, as language-different objects. However, the question arises as to whether there is a concept of empirical research that is compatible with the non-dualizing way of speaking and what advantage could be gained from such a concept. According to the dualistic theory of science, empirical research is carried out by addressing language-different objects: research provides information on reality which, then, is transformed into descriptions. Thus, language-different objects are

the source of knowledge, according to the dualistic self-understanding.

In my paper, I pursue the question of whether it is possible to conceptualize a theory of science that is compatible with non-dualistic thinking. What follows makes sense only for those who are interested in linking empirical research to the non-dualizing way of speaking. I would like to consider some issues relevant for such a conception.

The role empirical investigations of objects have in Mitterer's non-dualistic concept refers to the examination of diverging or contradictory descriptions of an object (Mitterer 1992: §§46–50). As an example, he uses the descriptions of a table as round or square. He compares the dualistic way of examination with the non-dualistic one. Both versions have in common that investigations are the basis of examination. That is, the procedures of investigation do not differ between the two versions. Investigations consist, for example, of the participants looking precisely at the table, moving their hands along the edge of the table feeling for

1 | Truth does not exist directly for us. Rather we need methods, instruments, and procedures appropriate to lead us to truth and justify our convictions. However, we do not have totally trustworthy means, which is why it is possible that our convictions can be false (cf. Grundmann 2008: 223). Gadenne (2010: 23) regards knowledge as a process that proceeds in three steps: the scien-

tist observes certain events, proposes hypotheses about the conditions under which such events take place, and tests the hypotheses by further observations.

corners, and using a pair of compasses. The two versions of inquiry do not differ in their methods but in the opinions of how the examination of the descriptions takes place: dualists take the view that descriptions are checked against the language-different object, non-dualists say that the reference basis of the examination is a new description completed jointly by the participants.

What I am interested in is the relation between inquiry and description within the non-dualistic way of thinking. Mitterer says that, according to the non-dualistic way of speaking, it is not the object that can be the arbiter between the descriptions. Nevertheless, he says that “the table is inquired into in terms of what shape it has – if it is shaped round or square or otherwise” (Mitterer 1992: §49, my translation). He points out that “descriptions are not taken from nowhere,” but are rather “based on inquiries” (ibid, my translation). Does this mean that in the context of inquiries, language-different objects are presupposed but not in the context of descriptions?

Thus, the question arises as to what is meant from the standpoint of the non-dualizing way of speaking by inquiring empirically into an object. Is the activity of inquiring identical with that of describing or is it another kind of activity? And if inquiring, as the activity of attaining knowledge, is another kind of activity than describing, what is its relation to the activity of describing? And how are its results transformed into descriptions?

A second question relates to the kind of objects that are empirically investigated. Of course, this question is closely associated with the character of the activity of inquiring. According to Mitterer’s non-dualizing way of speaking, descriptions start from objects that are themselves descriptions. If empirically inquiring is identical with describing, then the research object, i.e., the object from which the investigation starts, has the character of a description. If empirical inquiring is another kind of activity, then the question arises as to what character the research object has and what is its relation to the object of description.

Finally, I will address a topic that is specific to social-scientific research. Social-scientific research deals with texts (interviews, discussions, and data), and their interpreta-

tion is one of its central tasks. Analogous to the relation of object and description, Mitterer (2013) distinguishes a dualistic way of determining the relation between text and interpretation from a non-dualistic one. Of course, this question is of great relevance to a conception of social-scientific research that is compatible with non-dualistic thinking.

Empirical researching and the activity of describing

The process of inquiring into an object may be the content of a description and this description is, according to the non-dualizing way of speaking, the continuation of the description/object already made. For example: the description “the table is located in the corner” is continued into “the table located in the corner is inquired into in terms of its shape.” In the context of empirical research, however, I am not interested in the description of an object as being inquired into but in the process of inquiring as producing new content as material for describing an object, for example producing the description “round.” Does it make sense to think that inquiring is a linguistic activity?

I have approached the topic of the difference and relationship between inquiring and describing in two previous articles (cf. Ofner 2008: 148–152, 2010: 64–76). My argumentation was that the production of new contents that are added to the description already made is an activity that is different from the activity of describing. Of course, new description contents are added to description already made by describing. However, if the producing of new contents were itself an activity of describing, we would have to assume that the new contents come from language. How should we imagine such a process? Do we render language an object and select a certain description out of it in order to add it to the description already made? And if so, what kind of activity should selecting be? An activity of describing, too?

There is a further argument for the difference between describing and inquiring as a practical action. When someone *says* to us that he moves his hand over a rough surface or when we tell this to other people, there

is a significant difference from *carrying out* that activity. The difference is that we have sensory experiences when we carry out the activity and mental images when speaking of it.

When we conceive of inquiring as different from describing, the question arises as to what relationship exists between the two kinds of activities and how the results of inquiries are transformed into descriptions. On the one hand, it would be a contradiction in the non-dualizing way of speaking to conceive the results of inquiry as language-different objects that then are described. On the other hand, inquiring should not be conceptualized as an activity of describing, as argued before.

The problem we have to solve is to connect practical action and linguistic describing in a way that is compatible with non-dualistic thinking. That is, to connect them as not categorically different from each other. As I have pointed out in previous papers, the language theory of George Herbert Mead² offers the opportunity to conceptualize acting and describing as different but not categorically different activities: as two kinds of activities that are connected with each other (cf. Ofner 2008: 148–152, 2010: 64–76). According to Mead, linguistic utterances are gestures initiating actions that are, however, not carried out. Thus, there is no categorical difference between speaking and acting because speaking is itself a kind of acting but is initiated or potential acting. We have sensory experiences when acting practically: distant experiences (color, sound, odor, taste, temperature, body movement) and tactile experiences (solidity, mass, surface character). The action character of speaking lies in its activating of past sensory experiences, but activating them as images. Linguistic utterances can be conceived of

2| Mead is not an exponent of classical behaviorism: he explicitly distances himself from J. B. Watson (cf. Mead 1934: 2). The designation of Mead’s psychology as social behaviorist stems from Charles W. Morris, who was a student of Mead and edited diverse student notes on Mead’s courses under the title “Mind, Self, and Society from the Standpoint of a Social Behaviorist.” Mead himself only says that his approach starts from the social behavior or conduct of individuals.

as descriptions in the sense of Mitterer's non-dualizing way of speaking. They have, however, a further dimension, as far as they indicate experiences and impulses to act. As components of linguistic activities, images have an expectation value: they indicate a certain behavior and experiences attached to them that would appear if the behavior were carried out.

Mitterer does not define in detail the meaning of his concept of "description." Especially, he does not explain its relationship to mental dimensions. The simplest and most general definition may be that descriptions are linguistic utterances that appear in discourses. In the center of the non-dualizing way of speaking is the critique of truth claims: Mitterer's non-dualism does not deal with the processes by which descriptions are produced, but only with the results of such processes, that is, with descriptions. Mitterer is not fixated on the terminus "description" even though he prefers this terminus. Additional to the concept "description," he mentions some other terms to indicate the mechanism of dualizing (cf. Mitterer 1992: 11–12, §6, §16, §30; 2001: §8): consciousness, perception, observation, knowledge, opinion. These notions could be summarized by the term "mental." In connection with Mead's theory of language, I prefer the notion "imaginary," and particularly the term "idea" for the image of action.

The adequate notion to characterize the sensory dimension of action is "experience." According to the non-dualizing way of speaking, the object or the event in regard to which we attain further experience is present as an experience we have already had. Attaining experience means attaining experience additional to the experience we have already had. When we find a certain wine tastes flowery and has peppery notes on the finish, we have previously experienced drinking wine.

The relationship between action and describing corresponds to the relationship between sensory experience and the image of that experience. This relationship is not relevant for the non-dualistic critique of truth claims because this critique addresses only the categorical separation of object and its description in discourses. Every discourse participant may have his perceptions, experiences, images, ideas, and knowledge but

in the discourse, this mental dimension is not relevant for the other participants. It is the descriptions that are exchanged. However, with regard to the question of whether empiricism can find a position in the non-dualistic way of thinking, the relationship between the sensory phenomena of acting (experiences) and those of describing (images and ideas) is indeed relevant because the results of empirical inquiry are attained in those forms.

Mead's language theory allows activities of empirical inquiry and activities of describing to be connected in a non-dualistic way. Practical action and linguistic activity are coupled together. The start of a practical activity triggers a certain linguistic utterance (a gesture) and the images and ideas that are merged with this utterance; and these images and ideas indicate experiences that have been had in the past. Those past experiences triggered by the perceptions in the present situation of action are expressed linguistically and describe the present situation of action. In this sense, the discourse is the forum where (different) past experiences are exchanged.

Objects of experience and attaining new experiences

The integration of the dimension of action and experience into the non-dualistic conception leaves open the question of what the source of attaining knowledge is and how the process of attaining knowledge can be conceived. Whereas dualists think that inquiring is directed at the object, it is not clear what the object of inquiring in the non-dualistic perspective is. As has been noted above, the object is ruled out for *examining* descriptions. Mitterer writes: "If we abandon the assumption of a language-different object, the examination of description cannot take place by addressing the object." (Mitterer 1992: §48, my translation). Mitterer, however, means that it is the *object* that is inquired into: "The examination of the description of the table is done by inquiring what shape the table has..." (ibid: §49, my translation) Additionally, Mitterer writes that descriptions are not "taken from nowhere" but have come about by inquiring into the table (ibid).

If inquiries are the basis of descriptions and language-different objects are not presupposed, of what kind, then, are the objects that are inquired into? Are language-different objects presupposed when inquiries are carried out and are language-different objects not presupposed when they are described?

Discourse as the perspective of the non-dualizing way of speaking

I think we would leave the perspective of Mitterer's non-dualizing way of speaking if we asserted that nothing *exists* other than descriptions. It is the term "description" itself and the term "interpretation," respectively, that Mitterer deals with in the article "On interpretation" (Mitterer 2013), which shows the perspective the non-dualizing way of speaking assumes. Mitterer conceptualizes the relation between text and interpretation, analogous to the relation between object and description, as the relation between interpretation so far and interpretation from now on (ibid: §12). In contrast to this, dualistic thinking makes a sharp separation between the level of text and the level of interpretation and ascribes the function of referee to the text, which decides whether a certain interpretation is true or false (ibid: §5). Mitterer, in contrast, argues that we always start from an interpretation and cannot distinguish between text and interpretation because we are in the situation of interpretation just as we try to distinguish (ibid: §16). We can make distinctions between the text and the interpretation of another person only when we use our own interpretation as the basis for judgments (ibid: §17), that is, when we presuppose our interpretation as the text.

Both terms, "description" and "interpretation," stem from the dualistic way of speaking. They require that there is something that is described or interpreted but is not itself a description or an interpretation, that is, a language-different object or an "interpretation-different" text. Mitterer uses these terms with the critical intention of showing that we cannot reach the referent the dualists presuppose without getting into logical difficulty (infinite regress). I think we would also get in logical difficulty if we ontologized the non-dualizing way of speaking. By "ontologizing the non-dualizing way

of speaking,” I mean the assertion that nothing exists that is different from description, or interpretation. Such an assertion would transgress the boundaries of the non-dualizing way of speaking and its critique of truth claiming. The non-dualizing way of speaking is conceptualized in respect of the discourse of opinions and research results: these results are communicated linguistically and can be communicated only linguistically. The assertion that nothing *exists* other than descriptions, or interpretations, would lead us into an infinite regress as well. If describing an object or interpreting a text is the continuation of a description or interpretation already made, then the question arises: The continuation of the description of what or the continuation of the interpretation of what? And we could play this game again and again. Additionally, we would fall into a logical contradiction between description and interpretation if we ontologized the term “interpretation” and asserted that there only existed interpretations. The description made by another person is a text and is present for me in the discourse as my own interpretation. Thus, if only interpretations existed, no text of another person would exist for me, only continuations of my own interpretations. If texts of other persons did not exist, interpretations would not exist either. This dilemma appears in the following formulation of Mitterer: “The text of Kant, which the non-dualist professor presents to the students for interpretation, forms a common starting-base for follow-up interpretations” (Mitterer 2013: §12). Does, then, the un-interpreted text of Kant exist after all?

The perspective of action and experience

These considerations of ontologizing the objects of descriptions lead me to the conclusion that the perspective of a non-dualizing way of speaking as developed so far by Mitterer does not allow us to find an answer to the question of what the source of new descriptions is. We have to proceed to the conception of practical action and integrate the conception of the non-dualizing way of speaking into it. I think the distinction between object and description is a secondary act in the context of communication: it is a result of differences between opinions in problematic situations when doubts ap-

pear. Linguistic utterances do not become assertions until a problematic situation occurs. Only then does the desire appear to define the object, that is, to find out to what extent different descriptions correspond to each other. The corresponding parts become the object of the descriptions in question. The inquiries that have led to the different descriptions have been finished at that time. The inquiries can be made accessible to other people via descriptions but they are above all activities that create experiences, not only descriptions. They are actions that create experiences, which for their part can be indicated in linguistic form.

The result of my considerations is that we leave the perspective of Mitterer’s non-dualizing way of speaking when we address the issue of the source of attaining knowledge and continuing descriptions. Addressing this issue, we change to the perspective of action. How can attaining knowledge and continuing descriptions be conceptualized from the perspective of acting?

In the same way as the object of description is itself a description, the object about which we attain experience is itself an experience, the experience that we have attained in previous action. This means that when we attain new experience about an object, we continue the experience we have already attained. We would fall into the same trap as in the case of descriptions and interpretations if we asserted that nothing *exists* other than experience. What we can say is that we cannot refer to objects independent from acting as the process by which we attain experience.

Experiential objects structure our actions: they form our action field.³ They are things as far as we have tactile experiences, they have diverse sensory characters as far as we make distant experiences, they are located distant from us as far as we move to get tactile experience. In this way, we get experience of space and time. Our behavior with objects is their meaning for us. That is, their meaning is the relevance they have for

3| The following considerations connect to Mead’s concept of object and his conception of experience process. For more about the notion “object,” see Mead (1909: 404f; 1912: 401f); about the process of attaining experience and knowledge, see Mead (1938: 26–62).

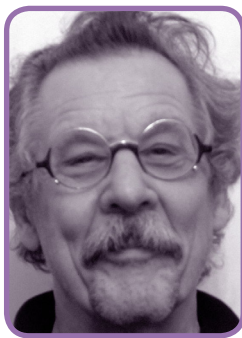
our actions. In linguistic activities, the diverse sensory experiences and the meaning of objects are stimulated in terms of images. In this way, Mitterer’s notion of the object of description is extended by the dimension of sensory experience and meaning. The difference between Mead’s empiricism and the traditional one is that he does not simply conceive of experience as an effect produced by an external object in the percipient individual but that experience is embedded in action. According to the non-dualistic conception extended by the dimension of action, we can distinguish between two situations: practical action and communicative action. Practical action is connected with sensory experience and, as far as it is accompanied by speech, images of experience.

Communicative action takes place only as a linguistic activity. The process of communication is characterized by indicating actions, by exchanging descriptions – which are, according to the presented conception, experiences in terms of images – and by discussion of opinions. Practical action is introduced by sensory experience (e.g., visual, acoustic, olfactory) that is merged with an impulse to act and with linguistic utterances. According to Mead’s language theory, linguistic utterances indicate experiences that have been obtained in the past in exerting the impulse to act.

George Herbert Mead’s conception of research

Speaking, then, is nothing other than stimulating past sensory experiences obtained in past acting. The experiences obtained in a past action are called “object” by Mead and the action is the meaning of the object. So actions are not separated from objects and are not directed to objects but are united with objects. The descriptions that are associated with action impulses and indicate experiences can be conceived of as expectations as well: experiences may stem from the past but indicate what experiences will take place when the impulses are carried out.

The next step of practical action is carrying out the impulse. When the experience obtained in carrying out the impulse answers the expectation initiated by the impulse, the object may be perceived as real and independent of us existing in “the



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world out there.” The character of reality disappears, however, when the expectation is not fulfilled. Then we are confronted with a problem: our behavior is inhibited and the object disappears. In such a situation, the opportunity arises to start a process to solve the problem. To Mead, action problems are those situations that stimulate creativity and lead to new experience. Mead stresses that we do not lose all our past experience when a problem appears. We do not fall into the bottomless void because problems are always limited. A reduced object always remains in every problem situation. When we leave the supermarket and cannot find our car in the car park, the whole world does not disappear: the car park and its surroundings remain, where we can look for our car, and the police remain for us to make a report. The reduced object consists of those experiences that are not called into question in that situation. This does not exclude that some of these experiences might very well be called into question in a later situation, with the consequence that the object is further reduced.

In Mead’s conception of research, the phase of analysis follows upon action inhibition. Mead characterizes this phase as follows: attention to the object and its surrounding is intensified, the object and its surrounding are broken up into elements, and impulses responding to the elements are activated. This is the way to discover the reduced object, that is, to find out what impulses can be carried out and what experiences are to be expected. Furthermore, solving a problem requires trying new activities and attaining new experiences. In this way,

the spectrum of options for action is broadened. According to Mead, speech has a central role in the process of analyzing objects because language is the mode individuals use to indicate options for action and experiences to themselves and to other persons.

If analyzing the object and its surroundings succeeds, then the phase of synthesis and assuming hypotheses can follow. This means that the diverse impulses found in the process of analysis are joined together to an action that promises that the inhibited action can be carried out. Hypotheses are imagined actions that are assumed to carry out the action. Also in this phase, language plays a central role because the imagining of action takes place in terms of descriptions. Creating hypotheses is the process that Charles Sanders Peirce calls “abduction.”

The research process is completed by testing the hypothesis; that is, by trying to carry out the action sequence that was linguistically conceptualized. If this is successful, new experiences and new knowledge are attained and the reduced object is extended or, in Mitterer’s words, the description of the object is continued. Mead notes that the conceptualized action sequence need not relate to only sense-perceivable elements but can also contain thought-constructs. This is, for example, the case in the construction of atom models: these models contain diverse particles that cannot be perceived by our sense organs but are assumed to exist because of changes in energy when certain manipulations are made. Such constructs are also relevant to social sciences when, for example, dispositions and different personality structures dependent on the class member-

ship of persons are assumed to explain their behavior. In the sense of Mead, the relevance of such constructions is that they are connected with action consequences that are observable.

The difference in Mitterer’s non-dualizing way of speaking

The presented phases of attaining knowledge show a relationship between object and description that is different from Mitterer’s non-dualizing conception. In Mitterer’s conception, the object as the description so far is the starting point of further descriptions – of descriptions from now on. In the version presented above, in the beginning there is simply a description together with experiences, there is no object of description. If no problem arises, there is no reason to change the current description. When, however, a problem occurs, then a reduction of experiences takes place; the reduced experiences then form the object of new experiences and descriptions. This change of temporal relationship between object and description is the consequence of the conception according to which problematic situations necessitate defining the object as the starting point for inquiries.

A special action problem is that which Mitterer considers, namely that different descriptions are presented in the discussion of research results and different views are taken by the participants. According to the approach of action and language developed above, the participants in discourse present to each other the research methods they have used, the experiences they had in past situations, and their new experiences.

Language enables them to participate in the activities and experiences of the others, to present their own actions and experiences to others, and to formulate objections. It is possible to discover linguistic misunderstandings (e.g., differences in the definition of notions) by describing in detail different actions and experiences attached to them, and to make suggestions to modify research designs. Of course, this procedure does not guarantee consensus in respect of the result. However, it has the advantage that the discussion is moved from the research results to the research methods and the process of producing results.

Social science research and interpretation

In contrast to natural sciences, social science research is based on linguistic sources, on information provided by persons in interviews and on texts of various kinds. The work of scientists is to infer behavior and social practices as well as societal changes and problems of social association from that information. Thus, interpretation of linguistic utterances has a central role in social research. Hence Mitterer's thoughts regarding interpretation are relevant to the work of social sciences (cf. Mitterer 2013).

Above, I have indicated the difficulties of the non-dualizing way of speaking, especially if we assert that there are no interpretation-different texts but only interpretations. What we can say is that we cannot refer to texts independent from our activity of interpreting. This means, however, that the texts of other persons are the sources of our interpretations.

In the context of social sciences, the interpretation problem appears as the problem of understanding each other and reaching agreement. The linguistic utterances of the members of communication processes are present to each other as interpretations. Thus, communication is principally subjected to the risk of misunderstanding. We could even go as far as saying that the participants cannot be sure to agree even though they think that their interpretations coincide. This is relevant to social research insofar as a large part of research material consists of interviews and written documents.

Thus, social scientists cannot distinguish their interpretations from what their informants said and the informants interpret possible requests of the social researchers as well. This problem reminds one of Niklas Luhmann's problem of double contingency in communication (cf. Luhmann 1985: 156).

If we confine our theoretical conception to pure linguistic processes, I cannot see how a fairly reliable understanding among communication partners should come about – and reaching agreement as to the object is a condition of the possibility of discussing differences in their interpretations. The chances for understanding are bettered when we integrate – as supposed in this article – action and experience into non-dualizing thinking. According to this conception, linguistic utterances are embedded in or merged with impulses to act and experiences. Impulses and experiences are activated in the listener as well. However, they need not correspond to those of the speaker. Impulses to act and experiences cannot be observed by other persons. When, however, linguistic utterances are linked to observable acts or when the communication partners address different action situations to indicate their experiences, then the chance of understanding each other is improved. Naturally, there is no way to remove misunderstanding completely because observed action results can also be interpreted differently. A further aspect we should take into account in this respect is that language and meaning of linguistic symbols developed in the context of joint activities lead to shared experiences. Joint activities are the basis of understanding.

Conclusion

Exchange of descriptions in scientific discourses does not suffice for the development of a conception of empirical research. Such a conception needs to be complemented by an idea of how experience and knowledge are produced. Mitterer's non-dualizing way of speaking requires a research conception that differs from the traditional ones, which are based on dualistic thinking. A research conception that is to be compatible with non-dualistic thinking is confronted with the question of what kind of relation

between inquiries and description exists and what is the source of attaining knowledge. In respect of social sciences, there is the additional problem that their objects are texts (interviews, documents, statistics etc.) that are to be interpreted by the researchers.

My dealing with this problem builds on Mead's theory of action and communication. Mead conceives of speaking as potential acting, as action that is initiated but not carried out. Description can be understood, thus, as actions and experiences made in the past and stimulated due to actual perceptions that correspond to those of the past. Inquiries are a special kind of actions that are carried out in problem situations and may provide new experiences.

The attempt to develop a theory of science that is compatible with the non-dualizing way of speaking poses the tricky question of what is the source of empirical knowledge and where additional description contents come from. On the one hand, non-dualistic thinking forbids the assumption of language-different objects that are the source of knowledge to dualistic thinking. On the other hand, we get into logical difficulties if we ontologize the non-dualizing way of speaking by asserting that nothing *exists* that is different from language. According to the conception developed, description and interpretations are results of actions in which experiences are attained. Objects of experience come from practical activities and we are able to refer to objects only via action. Objects always have a linguistic character. However, as objects of experience, they have an additional dimension: they are embedded in actions and are sensory perceptions. As descriptions, they are images of sensory perceptions.

From the view point of action-based thinking, inquiries are stimulated by action problems and action inhibition may lead to new experiences. Thus, actions in this sense are a source of attaining knowledge that exceeds already existing knowledge. The question remains of whether there is something that is different from action and experience and is in addition a source of attaining knowledge. If we answer this question in the affirmative, it would not be compatible with non-dualistic thinking to say that there are action- and experience-different *objects*. This would mean that there exists a world

that is independent from our actions and is, then, the referee for true experience with regard to description. I see two justifications for the assumption of a language- and experience-different world. One justification has been mentioned above: it concerns the logical difficulty that arises when we presume that nothing exists other than descriptions. The same difficulty appears in respect of experience. The second justification concerns the significant difference we experience between speaking and acting. In carrying out actions, we are confronted with resistance, as problematic situations and inhibitions show especially. I do not mean resistance in the sense of tactile experience, but difficulties in carrying out the ideas we have and the modifications and adaptations we have to make. As mentioned above, such difficulties are the sources of new experiences and indicate that there is something that is set against our ideas. Such resistance does not exist in speaking. We can say without linguistic difficulties that we can fly like a bird, that we met a unicorn in the forest, that the father of the gods, Zeus, turned into a bull and begot three children by Europa. If we have resistance to such utterances, it comes from experience, not from language. Saying "I build a table" needs only a second, but building a table is a complex process and needs manual skills.

The assumption of a language- and experience-different world in the sense I explained above – that is, not as objects but as counterpart of action – does not contradict non-dualistic thinking if we assume that we ourselves, as acting individuals, belong to the world as well. Then we are not categorically different from the world and acting would be an interaction process within which we experience various objects among which we are as acting persons, too.⁴ This conception is not in contradiction to non-dualistic thinking insofar as objects are not presupposed but are results of interaction, results as experiences. This means that descriptions and experiences cannot be examined against the external world. Thus, the external world is not relevant to the truth game: it does not change the logical difficulties we get into

when we try to refer to language-different objects in discourses.

The consequence of my argumentation is that Mead's conception of action and inquiry can serve as a suggestion and inspiration to develop a theory of science that is compatible with non-dualistic thinking. According to this conception, the failure of an action is the condition for the process of attaining new experiences and descriptions. At first, inhibition of action leads to a reduction of the object. The attempt then starts to find opportunities to carry out the initiated action. In this way, new experiences may be attained by new actions and connected with the experiences that create the reduced object. If this succeeds, we have acquired a new description that is relevant from now on – relevant until a problem arises anew. Language has a central role for the analysis of objects and the synthesis of action elements to a complete action because language allows imaginary action.

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RECEIVED: 5 SEPTEMBER 2012

ACCEPTED: 14 FEBRUARY 2013

4| The basic idea of this position corresponds to John Dewey's conception of knowledge (cf. especially, Dewey 1998: 27f.).