

EWA ZIELONACKA-LIS

**SCIENTIFIC UNDERSTANDING AND THE TRUTH
OF RELATION ON THE BASIS OF MARTIN BUBER'S
*I AND THOU***

*Development of the function of experiencing and using usually occurs through a diminishing of man's relational power. Martin Buber, *Ich und Du*, Polish trans. *Ja i Ty*, 1992, p. 64.*

*Everything on our way is a decision: considered, sensed, mysterious; the one that is made at the deepest level is all-mysterious and the most definite. Martin Buber, *Ibidem*, p. 93.*

*(...) whenever we touch a Thou we are enveloped by the breath of eternal life. Martin Buber, *Ibidem*, p. 78.*

I am writing this paper bearing in mind my own professional experience: that of a researcher-chemist, methodologist and philosopher of chemistry interested first and foremost in issues of scientific explanation, but also as a great admirer of Martin Buber's philosophy of dialogue. Can the attitude to reality that Martin Buber proposes contribute and enrich the outlook of a naturalist and researcher? How can a naturalist benefit from the dialogical attitude proposed by Martin Buber? What does the word I – Thou contribute to the scientist's approach? And how does Martin Buber view scientific knowledge? How does he reconstruct this knowledge? Which of its ele-

ments does he distinguish? And how is scientific understanding articulated by contemporary philosophers of science?

One of the most important objectives of science is to give an understanding of the world in which we live. It is provided by scientific explanations. In modern philosophy of science there are three important ways of thinking about scientific explanation: deductivist, erotetic and causal-mechanical. They seem to be mutually compatible and, to some extent, complementary. However, they differ in some important respects. An erotetic approach is connected rather with an actual research practice of working scientists, with their local activity, with the process of explanation taking place in a particular empirical science. There is in modern philosophy of science quite a different way of thinking about scientific explanation: a view of explanation as unification. It is not connected with an analysis and estimation of a single explanation; it is global and has a historical aspect. It was initially developed by Michael Friedman¹ and later in a modified way by Philip Kitcher². As Kitcher writes: “The intuitive idea behind unification is the generation of as many conclusions as possible using as few patterns. It is also important that the instantiations of the patterns should genuinely be similar, that is, that the patterns in question should be stringent”.³ It seems that the unificatory approach to scientific explanation is a natural successor of the “covering-law” model of explanation, the “received view” of Carl Hempel.⁴ Hempel claimed that explanations give systematic understanding of empirical phenomena by showing that they fit into a nomic nexus.⁵ There appear to be two main kinds of understanding of natural phenomena in the scientific sense which emerge from the crucial models of explanation. The first concerns a unified world picture. The second, connected with the causal-mechanical view of scientific explanation, consists in providing “knowledge of how things in the world work”.⁶ They are, to some extent, complementary. According to the causal-mechanical model of explanation developed by Wesley Salmon⁷, we explain phenomena not by showing, as Hempel claimed, that they fit into a nomic nexus⁸ but by showing how they fit into the causal nexus. The causal nexus consists of causal processes and causal interactions. The basic import for the total “process theory” of causality developed by Salmon has the fundamental idea connected with causal processes – they are agents of transmission. Causal processes transmit mass, momentum, energy and structure, information, probability distributions for interactions with other causal processes. They transmit causal influence, so they constitute physical causal connections among events in

¹ M. Friedman M., *Explanation and Scientific Understanding*, “Journal of Philosophy”, 71/1974, pp. 5-19.

² P. Kitcher P., *Explanatory Unification of the Causal Structure of the World*, in: “*Scientific Explanation, Minnesota Studies in the Philosophy of Science*”, vol. 13, P. Kitcher, W.C. Salmon (eds.), University of Minnesota Press, Minneapolis 1989, pp. 410-505.

³ *Ibidem*, p. 434.

⁴ C.G. Hempel, P. Oppenheim, *Studies in the Logic of Explanation*, “Philosophy of Science”, 15/1948, pp. 135-175; C.G. Hempel, *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science*, The Free Press, New York, 1965.

⁵ C. G. Hempel, *op.cit.*

⁶ W.C. Salmon, *Causality and Explanation*, Oxford University Press, New York-Oxford 1998, p. 89.

⁷ W.C. Salmon, *Scientific Explanation and the Causal Structure of the World*, Princeton University Press, Princeton 1984; W.C. Salmon, *Four Decades of Scientific Explanation*, University of Minnesota Press, Minneapolis, 1990.

⁸ C. G. Hempel, *op.cit.*

various spatio-temporal locations. Causal influence is transmitted CONTINUOUSLY – Salmon suggests that a connection between a cause and an effect “resembles” rather a rope or thread not a chain.⁹ On the other hand, causal interactions are means of production and modification of causal structures.

Philip Kitcher in his analysis of a mutual relation between law, explanation and causality claims that causal notions are derivative from explanatory notions. Kitcher describes these two latter accounts in a vivid manner as “top-down” and “bottom-up”. It must be stressed that in Philip Kitcher’s opinion the aim of science is not just knowledge, but unified knowledge. “It is its unified character which makes science explanatory, not its nomic or causal nature or its relevance to our pragmatic or epistemic concerns”.¹⁰ Kitcher suggests that A CONCEPTION OF UNDERSTANDING which serves as the goal of all scientific endeavors may be an over-arching principle of global methodology that applies to all sciences at all times.¹¹

At this point, let us return to the questions asked at the beginning. How does Martin Buber view scientific knowledge, scientific understanding? First of all it must be stressed that (as far as I know) not being a researcher-naturalist himself, Martin Buber was perfectly aware of the key elements of scientific knowledge: considering the object of investigation as a sum of properties or/and visualized quantity, the placing of “things” in a spatio-temporal-causal context, determining their measurability and conditionality, comparing, grouping into natural kinds. The passage about the tree is an excellent illustration of this:

I look at a tree. (...)

I can classify it to a certain species and look at it as a specimen, studying its structure and way of life.

I can disregard its specific existence and concrete form to such an extent that I will only see in it an expression of a law or laws, according to which a constant opposition of forces undergoes continuous moderation, or laws, according to which substances mix and separate.

I can dematerialize and immortalize it by reducing it to number, to a purely numerical relation.

But the tree remains my object, it has its place and its time, its quality and its properties.¹²

What puzzles and strikes me as a methodologist interested especially in issues relating to scientific explanation, is the fact that Buber repeatedly underscores an “unlimited hold of causality in the world of It” which is of “vital significance for a scientific ordering of nature”¹³, and a “fascination with the way things proceed, i.e. with unlimited causality”¹⁴ And a stressing of CONTINUITY OF CAUSALITY [vide: Wesley Salmon’s “processual” theory of causality] which in Buber’s opinion is absent in the picture of the world of the primitive man. And a child’s conversation with a “humming kettle”¹⁵ which immediately brings to my mind an analysis of

⁹ C. Salmon, *Four Decades...*, op.cit.

¹⁰ N. Koertge, *Explanation and its Problems*, “The British Journal for the Philosophy of Science”, 43/1992, pp. 85-98.

¹¹ See P. Kitcher, op. cit., p. 418.

¹² M. Buber, *Ich und Du*, Polish translation: *Ja i Ty*. Wybór pism filozoficznych, wybrał, przełożył i wstęp napisał Jan Doktor, Instytut Wydawniczy PAX, Warszawa 1992, p. 42.

¹³ Ibidem, p. 70.

¹⁴ Ibidem, p. 74.

¹⁵ Ibidem, p. 55.

the p and b predicament proposed by Sylvain Bromberger.¹⁶ In this way we enter Martin Buber's "world": "The world as experience belongs to the basic word I – It. The basic word I – Thou establishes a world of relations".¹⁷

The world has a double countenance for man, just as man has a double attitude. All around himself he perceives being, ordinary things and essences perceived as things, he perceives occurrences, ordinary processes and actions as processes, things made up of properties, processes made up of moments, things plotted on the grid of space, processes plotted on the grid time, things and processes limited by other things and processes, measurable by them, comparable with them, an orderly world, a world apart. (...) Only regarding it can you 'communicate' with others (...). Man also encounters being and becoming as his Opposite, but always as only *one* essence and ever thing only as an essence; what exists is disclosed to him in occurring, and what occurs happens to him as a being. (...) Measure and comparison have vanished and it is up to you what part of that which is immeasurable becomes reality for you. ENCOUNTERS DO NOT ARRANGE INTO THE WORLD, BUT EACH OF THEM IS FOR YOU A SIGN OF THE ORDERLINESS OF THE WORLD.¹⁸

How can the dialogical approach proposed by Martin Buber contribute to the outlook of the natural scientist and enrich it? What does the word: I – Thou bring into the researcher's attitude? First of all it helps realize once again with all clearness that scientific cognition – though extremely important – is just one of the ways of reaching reality. And it would be good not to stop at that. All the more so that as Martin Buber puts it, "...development of the function of experiencing and using usually occurs through a diminishing of man's relational power – the only power that enables man to live in the spirit"¹⁹, whereas "... usually, the world of It of each culture is more extensive than the world of It of the preceding culture".²⁰ And what about the I – Thou relation? What about enjoying the presence of the Opposite, to use the beautiful term introduced by Martin Buber? According to him, only this relation, even though inevitably doomed to transformation into the I – It reference, makes real life possible. The I – Thou relation is characterized by reciprocity and directness. "THOU (...) IS MORE THAN IT KNOWS. THOU DOES MORE AND MORE HAPPENS TO HIM THAN IT KNOWS. NO FALSEHOOD REACHES HERE; HERE IS THE CRADLE OF **TRUE LIFE**".²¹

True insight lasts short; a natural essence, which has just disclosed itself before me in the MYSTERY OF RECIPROCAL INTERACTION, again renders itself to description, decomposition, classification, has become a POINT AT WHICH DIFFERENT CIRCLES OF LAWS INTERSECT.²²

¹⁶ Vide: E. Zielonacka-Lis, *Filozoficzne koncepcje wyjaśnienia naukowego a współczesna chemia [Philosophical Conceptions of Scientific Explanation and Modern Chemistry]*, Wydawnictwo Naukowe Instytutu Filozofii UAM, Poznań 2003, pp. 70-72 and the footnotes therein.

¹⁷ M. Buber, op. cit., p. 41.

¹⁸ Ibidem, pp. 58-59, uppercase – E.Z.-L.

¹⁹ Ibidem, p. 62.

²⁰ Ibidem, p. 61.

²¹ Ibidem, p. 43, uppercase – E.Z.-L.

²² Ibidem, p. 49, uppercase – E.Z.-L.

On the one hand, a combination of man's cognitive capacities which are realized in the most rational and responsible way in scientific knowledge and of his relational power, reveals in an individual as well as global dimension the need of a constant concern about maintaining the right proportions between those two possibilities. On the other hand, a comprehensive philosophical view of the problem opens a perspective, creates an opportunity to identify common planes between the two so distinct areas of philosophy as the philosophy of science and the philosophy of dialogue. Similarly as the noticed and philosophically analyzed analogies – ALL DUE DIFFERENCES CONSIDERED – between the world of people and the “world” of chemical molecules.²³

In the context of the I – Thou relation let us also note the relevant spheres distinguished by Martin Buber. The first such sphere pertains to living with inanimate nature: regarding this pre-threshold sphere that extends from stones to the stars we deal with a reciprocity of being. Buber uses the term “threshold of reciprocity” to refer to the sphere viewed in the perspective of our addressing an animal as a You. An extremely important sphere pertains to living with other people – here, complete reciprocity is, as Buber accentuates, a grace. However, in some I – Thou relations connected with this sphere, such as the specifically educational and psychotherapeutic one, and the relation of pastoral guidance, there occurs a normative limitation of reciprocity. “The extended lines of relations intersect in the eternal Thou. (...) which of its essence cannot become It”²⁴. As the author puts it – in this case the relation is silent, but linguistically creative. In this context it is worthwhile to note how this leading philosopher of dialogue understands language. “God's speech to men permeates everything that happens in the life of each one of us, and everything that happens in the world around us, all the biographical, historical goings on, and makes them a hint and a demand for you and for me”²⁵. And “A MAN WHO HAS BECOME A PARTICIPANT IN THE RELATION WITH GOD CAN ONLY FULFILL IT WHEN ACCORDING TO HIS STRENGTH AND ACCORDING TO HIS MEASURE OF EACH DAY HE WILL REALIZE GOD ANEW IN THE WORLD. THIS IS THE ONLY TRUE WARRANTY OF CONTINUITY”²⁶. And also St. Paul's exhortation from his First Letter to the Corinthians 10:31 which may accompany us at the threshold of the successive days of our life and enliven our Catholicism and our encounters with God: “Whatever you eat, whatever you drink, whatever you do at all, do it for the glory of God.”

Literature

- Buber M., *Ich und Du*, Polish translation: *Ja i Ty*. Wybór pism filozoficznych, wybrał, przełożył i wstęp napisał Jan Doktor, Instytut Wydawniczy PAX, Warszawa 1992
- Friedman M., *Explanation and Scientific Understanding*, “Journal of Philosophy”, 71/1974, pp. 5-19.
- Hempel C. G., *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science*, The Free Press, New York, 1965.
- Hempel C. G., Oppenheim P., *Studies in the Logic of Explanation*, “Philosophy of Science” 15/1948, pp. 135-175.

²³ E. Zielonacka-Lis, *Filozoficzne koncepcje...*, op.cit.

²⁴ M. Buber, op. cit., p. 85.

²⁵ M. Buber, op. cit., p. 124, Afterword to: *Ich und Du* in the Polish translation.

²⁶ *Ibidem*, pp. 111-112, uppercase – E.Z.-L.

- Kitcher P., *Explanatory Unification of the Causal Structure of the World*, in: "Scientific Explanation, Minnesota Studies in the Philosophy of Science", vol. 13, P. Kitcher, W.C. Salmon (eds.), University of Minnesota Press, Minneapolis 1989, pp. 410-505.
- Koertge N., *Explanation and its Problems*, "The British Journal for the Philosophy of Science", 43/1992, pp. 85-98.
- Salmon W. C., *Scientific Explanation and the Causal Structure of the World*, Princeton University Press, Princeton 1984.
- Salmon W. C., *Four Decades of Scientific Explanation*, University of Minnesota Press, Minneapolis, 1990.
- Salmon W. C., *Causality and Explanation*, Oxford University Press, New York-Oxford 1998.
- Zielonacka-Lis E., *Filozoficzne koncepcje wyjaśnienia naukowego a współczesna chemia [Philosophical Conceptions of Scientific Explanation and Modern Chemistry]*, Wydawnictwo Naukowe Instytutu Filozofii UAM, Poznań 2003.
- Zielonacka-Lis E., *Encounters ... A Diversity of Encounters...*, "Lingua ac Communitas", No. 13, Warszawa-Poznań 2003, pp. 37-42.

Scientific understanding and the truth of relation on the basis of Martin Buber's *I and Thou*

ABSTRACT. The dialogical approach to reality presented by Martin Buber in *I and Thou* enriches the outlook of a naturalist and researcher. Scientific cognition is just one of ways of reaching reality, so there is the need of a constant concern about maintaining the right proportions between a man's cognitive capacities and of his relational power.