
Knowing Beyond Science: What Can We Know and How Can We Know?

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According to a perhaps naive, but still dominant positivistic view of science, scientific knowledge is the only reliable knowledge. It is reliable because it is objective. It derives its objectivity from the objectivity of observation made by a detached observer. The way in which empirical scientists look at the world is sometimes described as “scientific attitude.” In order to be objective observers, scientists must be indifferent, disinterested, neutral and impartial.¹ Personal opinions or preferences have to be suspended. No subjective elements are allowed to intrude. Science is believed to be reliable if it is based on objective and verifiable observational statements which can be transmitted into laws and theories.

The spectacular achievements of natural science and technology in today’s world appear to support the belief in the objectivity, reliability, and even supremacy of scientific knowledge. But is this view truly justified? Does science offer the best possible route to reliable knowledge, not only of natural but also of social phenomena? Should pre-scientific forms of knowledge, such as ethics, be seen as a matter of individual preferences or subjective emotions, and therefore be disregarded as knowledge? Before I attempt to answer these questions, I shall address the issue of objectivity in science. I believe that the understanding of this issue will

¹ W. Lawrence Neuman, *Social Research Methods*, 4th ed. (Boston: Allyn and Bacon, 1999), 9.

help us to evaluate rightly the scientific claim to know and to assess the place of science among other forms of knowledge.

Subjectivity in Scientific Objectivity

One of the key characteristics of modern science is objectivity. Objective, scientific knowledge is held to be independent of attitudes, beliefs, values and other subjective states of mind of individual scientists. It is believed to be independent of the human mind that either creates or understands it. While defending objectivity in science, Karl Popper says:

My . . . thesis involves the existence of two different senses of knowledge or of thought: (1) knowledge or thought in the subjective sense, consisting of a state of mind or of consciousness or a disposition to behave or to act, and (2) knowledge or thought in an objective sense, consisting of problems, theories, and arguments as such.²

Popper radically distinguishes “objective” theories, problems and arguments from “subjective” states of mind. However, just as scientific knowledge, derived from observation, presupposes the scientific attitude of being a detached, objective observer, so also its verification and sharing with other members of the scientific community requires the same attitude. Without this attitude, science would neither be objective nor inter-subjective. Objectivity and the scientific attitude are thus interrelated. If this is the case, subjectivity must indeed be taken into account, and objective knowledge is not independent of the human mind as is commonly believed. It is dependent upon the states of mind which constitute scientific attitude: on being indifferent, disinterested, neutral and impartial.

Being a disinterested, objective observer—indifferent, disinterested, neutral and impartial—can be contrasted with being engaged. Once we engage in something, we are no longer indifferent or neutral. We take a personal stand on something. Taking a stand on different issues, holding beliefs, being emotionally and personally involved in many life situations are all characteristic of everyday life. Scientific attitude, which can best be described by the word “indifference,” thus lies in direct opposition to the everyday human attitude based on preferences and feelings. But in-

Scientific objectivity entails subjectivity.

² K. R. Popper, *Objective Knowledge* (Oxford: Oxford University Press, 1979), 108-109.

difference, a lack of feeling, is a state of mind as well. There is subjectivity in scientific objectivity, namely, indifference.

The Objectivist's Claim to Knowledge

Looking at the world impersonally, neutrally and indifferently, which is the view of a detached, objective observer, is a way of relating to it from a certain perspective. The pursuit of objectivity leads to abstraction from the individual scientist's personal position in the world and the preferences and feelings that distinguish him or her from other human beings. Thomas Nagel goes so far as to assert that "objectivity involves not only a departure from one's individual viewpoint, but also as far as possible, departure from specifically human or even mammalian viewpoint."³ Further, he says:

We must admit that the move toward objectivity reveals what things are like in themselves as opposed to how they appear; not just how they appear to one, relatively austere point of view as opposed to others.⁴

Nagel believes that abstraction from an individual and specifically human viewpoint, which allows us to look at the world "not from a place within it, but from nowhere in particular,"⁵ can lead us to know things as they are in themselves, and not as they appear to be. Objective knowledge, thus obtained, is a true account of the actual world. Is this realistic position justified?

Firstly, we can give an idealistic objection that there is no knowledge without the knower; therefore, we cannot abstract from the actual knower. The "view from nowhere" must always be a "view from somewhere."⁶ An individual scientist can abstract from his or her position in the world, his or her preferences and feelings, but he or she cannot abstract from being the subject in which objective knowledge is constituted. The scientist cannot go beyond his or her subjectivity in the form of scientific attitude. A complete abstraction from human personality and a deper-

"View from nowhere" always a "view from somewhere."

³ Thomas Nagel, "Subjective and Objective," in *Post-Analytic Philosophy* (New York: Columbia University Press, 1985), 42.

⁴ *Ibid.*, 45.

⁵ *Ibid.*, 41.

⁶ The phrase "view from nowhere" alludes to Thomas Nagel's book *The View from Nowhere* (New York: Oxford University Press, 1986). It was coined by Lorraine Code to describe the epistemological position of a detached observer. See Lorraine Code, *Rhetorical Spaces* (New York: Routledge, 1995), 24-25.

sonification so as to transcend subjectivity and a specifically human or even mammalian viewpoint cannot be conceived of and hence is impossible.

The form of subjectivity that refers to scientific attitude has been described by the word “indifference.” Empirical scientists look at the world “objectively,” indifferently, as if it were an object. They do not enter into personal relationships with the objects of their inquiry. But by looking at the world in this way, we can learn about it only from a certain viewpoint. This is not the way to know it as a whole. Therefore, scientific knowledge can give us only a partial and not a complete picture of the actual world. Further, if objective, scientific knowledge is a partial one, it cannot claim to reveal what things are like in themselves. It cannot know things as they are themselves but only as objects. An objective account will omit something.⁷ As I will now attempt to show, objective knowledge cannot give us a true account of the actual world, but only of its objective aspect.

An objective account omits part of the whole.

The Forms of Subjectivity: Indifference, Love and Hate

Our knowledge is not independent from our state of mind. Objective knowledge is impossible without the scientific attitude of being a detached, neutral observer. The basic emotional states of mind are indifference, love and hate. Indifference can be defined as suspension of feeling or a lack of feeling toward something. It is the form of subjectivity that is a necessary condition for an objective, impartial, disinterested process of inquiry, and for objective knowledge. By contrast, love and hate are two opposing feelings, expressing respectively inclination and disinclination toward something.⁸ I shall now analyze the influence of these emotional states on our knowledge.

⁷ Nagel, “Subjective and Objective,” 45. Nagel notices, perhaps in a self-contradictory manner, that the pursuit of objectivity is not an effective method of reaching truth about everything, but he does not draw from this point appropriate consequences.

⁸ By preliminarily defining love as an inclination toward something, I have not ruled out the possibility of making a distinction between objects that are worthy of being loved and objects that are unworthy. Love does not exclude rational evaluation. Nevertheless, in love there is also an aspect of selfless giving that is not based on calculable expectations. Consequently, love, subsequently described as affective engagement, is a more complicated phenomenon than a mere inclination toward something. It includes the feeling of unity with others—the key factor, as I argue, in fully knowing them.

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The most striking example of hate can be found in the situation of war. In war, both sides, driven by antagonistic interests, mutual fears and hostile feelings, do violence to each other and accuse one another of doing wrong. This gives rise to the brutality of war and the passion of hatred: disinclination toward the other side. If I am disinclined toward something, I do not wish to have anything to do with it, and particularly, to know it as it is. Hence, if we define knowledge traditionally as justified true belief, hate does not result in knowledge. It produces and reinforces prejudices that disfigure facts and contribute to false beliefs. To be sure, in the situation of war we also find some objective knowledge that is instrumental in the destruction of the enemy. Soldiers, trained to be the instruments of war, do not wish to know anything more about their enemies than how to destroy them effectively. They are not interested in them as persons but as objects of possible annihilation. If one side assesses the strength of the other side and the means of victory, then the element of hatred is temporarily put into brackets, giving way to a cold-headed estimation. In short, indifference gives rise to objective knowledge which is a partial knowledge; but hatred does not give rise to any knowledge at all.

If hate results in separation and strife, love brings about unity. If I love someone, I desire to be together with that person. If I love something, I feel inclination toward it. In both cases I am affectively engaged. The emotional, affective engagement unites me with what I love. What is the relationship between love as affective engagement and knowledge?

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Perhaps the simplest example of love can be found in motherhood. The way in which a loving mother knows her child goes beyond knowing objective properties such as the child's weight or height or such facts as the child's age, sex, or place and date of birth. Taking care of the child's growth, being aware of her child's unique individuality, she cherishes the way in which the child smiles, walks, speaks and thinks. She knows her child in different life aspects. Her knowledge requires constant learning: how to respond to and act toward her child in diverse situations, how to let him grow and unfold as he is. It cannot be reduced to simple, observational propositions. Now, could it be that what the mother knows is unjustified or ill founded? She might be surprised if she suddenly receives a phone call from the school informing her that her boy, whom she believed to be so good-hearted, has done some-

thing wrong. Is then the knowledge of her child not knowledge at all, but a collection of illusions, prejudices, emotions and preferences? Can we truly know a person in any other way than as an object or a collection of facts?

Knowing Persons as Objects

How is it possible to know another person? Positivist epistemology which is dominant in today's social sciences denies that we can know another person in a different way than as a physical object. Human beings are assumed to be egoistic, self-interested, pleasure-seeking, rationalized individuals. They are moved by external causes which have the same effect on everyone. We can learn about them only by observing their behavior. What happens in their minds is neither publicly available nor even considered important.⁹

The basic assumption that underlies the epistemology of positivist social science can be traced to the thesis of physicalism. In the words of A. J. Ayer, the thesis is that "to say anything about a person's thoughts, or feelings, or sensations, or private experiences of any kind, is always equivalent to saying something about his physical conditions or behaviour."¹⁰ The ground for this thesis is belief in the privacy of experience. Mental objects such as our thoughts, feelings, or sensations are considered private. They are things to which we alone have access. The possibility of their communication is denied. By contrast, physical objects, material things and their behavior, belong to the public world. They are held to be public because of the conjecture that different people can perceive them in a like manner. Consequently, only observational statements, statements about physical objects, can be verifiable and produce knowledge. Knowledge is observational. Thus, according to the positivistic view, when we speak about our mental states, we can refer to our own experiences; but when we speak about the mental states of others, we can refer only to other persons' observable behavior which corresponds to their mental states.¹¹ Our talk about minds is translated into talk about bodies.

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There is, however, a difficulty with the belief in the privacy of

⁹ Neuman, *Social Research Methods*, 67.

¹⁰ A. J. Ayer, *The Problem of Knowledge* (New York: Penguin, 1984), 210.

¹¹ *Ibid.*, 215.

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experience that supports the thesis of physicalism. It is inconsistent with scientific and everyday practice. As a matter of fact both in science and in everyday discourse we communicate our thoughts to others. It is difficult to imagine how, without communication of thoughts and ideas, there could be an accumulation of knowledge, and how education and science could be possible. That which we usually claim to know is not limited to the content of our present experience. Often we give grounds for accepting a given statement by relaying some evidence that has been communicated to us by our teachers and other persons. When a professor provides a piece of scientific evidence that falsifies Bohr's atomic theory, one cannot deny that to understand him we have to follow his thoughts. Observing the movement of his body or other aspects of his physical condition while he is lecturing would not say anything about his reasoning and would be useless for comprehending his lecture. Further, we can communicate not only our thoughts to others, but also our attitudes and feelings. Objectivity in science presupposes the scientific attitude of being a detached, objective observer. If this attitude, based on indifference—suspension of feelings—is a part of proper scholarly conduct and is learned and internalized during many years of schooling,¹² it is because it can be communicated and plays a vital role in scientific activity. It must be shared by scientists to ensure the objectivity and inter-subjectivity of research.

If thoughts and feelings are declared incommunicable, then we can know other persons only as physical objects, by observing them and referring to sensual facts. Knowing all the facts about someone does not yet count as knowing him or her as a person, but only as an object. However, even if, as Ayer maintains, "different people can share the same thoughts and feelings, but they are not literally the same,"¹³ and thus a possibility for misunderstanding is open, it does not mean that communication between humans is impossible. Further, as I will show below, perceiving the same physical objects can lead to different perceptions and interpretations of them. Hence, the distinction between private experiences and public objects that lies at the core of positivistic epistemology is ill founded. The objective limitation set on the knowledge of other persons must be declared erroneous.

¹² Neuman, *Social Research Methods*, 9.

¹³ Ayer, *The Problem of Knowledge*, 199.

Overcoming Separateness: Knowing Persons as Persons

Our inability to have direct access to the thoughts and feelings of others stems from our being separated individuals. Our separation also imparts our ability to communicate with other people. There is always a question as to whether the words that we use to describe our private experiences have the same meaning for us and for others. Ayer claims that there is no possible adjustment of our situation as humans by which our separateness could be overcome.¹⁴ It is true that from the point of view of our bodies, we are distinct, separated individuals. As a physical object, one is clearly not somebody else. But it is not so obvious that we are always separated with respect to our minds. Our mental separateness is a dynamic process. Sharing the same vocabulary and the same values connects people more closely to one another and makes them less separated in their minds. On the political level, sharing the same vocabulary and basic values provides individuals with a sense of national unity and makes the people into a nation. On the other hand, antagonistic interests, mutual fears and hatred divide people and set them apart in strife. This can refer to nations, other groups of people, and to individuals. Even some strictly private experiences such as our childhood memories, dreams or concerns can either be shared with other persons of our choice, leading to mutual understanding and a sense of emotional unity, or be kept secret.

Mental separateness from others a dynamic process.

In each human being there is a deeply rooted need to overcome separateness from others.¹⁵ We fulfill this need in various ways when we seek the attention, acceptance or admiration of others. But the real adjustment of our situation as humans by which separateness is overcome is love. It is the feeling which brings us together. Further, as I will attempt now to show, love is also the way to knowledge which is appropriate for knowing persons as persons.

Knowing persons as persons can be elucidated by reference to Kant's statement that the human being "exists as an end in himself and not merely as a means to be used by this or that will."¹⁶ Although the statement is formulated as descriptive, it is in fact

¹⁴ *Ibid.*, 217.

¹⁵ Erich Fromm, *The Art of Loving* (New York: Harper & Row, 1974), 8.

¹⁶ Immanuel Kant, *Grounding for the Metaphysics of Morals*, trans. James W. Ellington (Indianapolis: Hackett, 1993), 35.

Knowledge of persons as persons cannot be indifferent.

normative. It refers to the Kantian practical imperative to “treat humanity, whether in your own person or in the person of another, always . . . as an end, and never simply as a means.”¹⁷ What is the relevance of this statement for knowing persons as persons? If a person is just a means for some end, then to know her is to know her in some depersonalized way: as an object which is good for something. To give an example, we usually know the cashier in a supermarket as an easily replaceable human object that provides us with some basic service for which she gets paid. It does not usually matter for us whether this or another cashier serves us on a given day. It is rather uncommon that we, who mostly live in today’s large cities, enter into personal relationships with people who provide us with basic services on an everyday basis. Most of these people remain anonymous for us. Our attitude toward them is that of indifference. Further, this attitude becomes an archetype for today’s interpersonal relationships. Even very intimate knowledge relations are often of human objects knowing human objects, of people who treat each other solely as a means. By contrast, if a person is an end in herself, then to know her does not mean to know her to be of some use, but to know her fully as a whole; it is to uncover and cherish the richness of her unique personality. In order to know someone fully and not just as an object, one cannot be just indifferent, one must be loving.

It can be argued that we are never able to know someone fully. I can respond that just as overcoming separateness is a dynamic process, so too is knowing other persons as persons. It is not based on passive observation, but is acquired differently: interactively and relationally, i.e. by entering into an interactive relationship with the other, by communication and exchange of thoughts and feelings, by affective engagement.¹⁸ Because our attention is by nature selective and limited, and there are different types of relationships in which we enter with other people, it is technically impossible to know everything about every person whom we encounter. But knowing everything about someone is not even essential to knowing him or her as a person. For this would imply that to know a person as a person can be reduced to a collection of facts. What is really essential, however, is our loving attitude: our be-

¹⁷ *Ibid.*, 36.

¹⁸ I owe the phrase “interactively and relationally” to Lorraine Code. See *Rhetorical Spaces*, 47.

nevolence and openness toward the other, an awareness that this is a person, a partner for communication, and not an object. Love, an attitude of affective engagement with others, is not a symbiotic attachment to some particular person to the exclusion of all others. Like scientific attitude—a prerequisite of objective knowledge—loving attitude determines human relatedness to the world as a whole. It is a prerequisite of knowing persons as persons and not as objects.

Loving attitude determines human relatedness to world as a whole.

Knowing Objects as Persons

If knowing persons as persons presupposes a loving attitude and involves communication and exchange of thoughts and feelings, knowing objects as persons is properly speaking impossible and can be spoken of only in a derivative sense. We obviously can not communicate with stones or trees, and our ability to exchange thoughts and feelings with animals, even with those which are most intelligent and friendly, is very limited. On the other hand, it indeed makes a difference whether we look at the world through the lenses of love, hate or indifference. Our affective attitude not only influences the way we know humans but other beings as well. This will be illustrated by an example.

Let us imagine an oak tree. A biologist would possibly describe it as belonging to the genus *Quercus*, producing acorns, growing to a height of about 100 ft (30.5 m), and usually found in the northern temperate regions. His statement would be supported by evidence gathered about oak trees by other scientists in the process of disinterested observation. By dispassionately looking at the tree, he would verify the already accumulated scientific knowledge in this field. A woodcutter would look differently at the same object. For him, oak, prized for its strength, elasticity, and durability, is the best of timber woods. He would look at whether the tree is already fully grown and healthy, and whether it can give a substantial amount of timber. His outlook would also be dispassionate and indifferent, but guided by utility. But the tree lover, who has lived nearby for many years and remembers the tree since his childhood, looks at the oak tree in a completely different way. He would find the scientific knowledge of the oak tree interesting perhaps, but not very relevant to him, and the idea that the tree might be felled for timber, terrifying. He would recall how often he had sat beneath the tree alone or with his parents, the pleasant shadow

that would protect him from the sun, the beautifully shaped branches on which he would climb up to the top of the tree, the mysterious sound of the leaves, and many other details which neither the biologist nor the woodcutter would be able to relate or understand, unless they had also fallen in love with the tree.

Now, what the tree lover says is not merely a matter of subjective emotion or preference. It is not just his private knowledge. This is because his experiences—his thoughts and feelings about the tree—can be communicated in prose, poetry, paintings or even music to other individuals and can eventually be verified by their own experiences. It is obvious that we cannot engage in a conversation with an oak tree, and by exchange of thoughts and feelings know it properly as a person. However, if we look at it affectively and do not see it solely as an object that can be either indifferently described or used for some definite purpose, then we can discover its individual qualities, which may make it into something close, almost like a person. These qualities can be described, communicated, shared and debated with others in a discourse, thus constituting a body of non-objective, but inter-subjective knowledge.

Personal, non-objective knowledge in the case of natural objects is not direct, but derivative. It is derived from the consensus among individuals who share and debate their experiences related to particular objects. Further, non-objective, inter-subjective knowledge does not only relate to physical objects. It is also the kind of knowledge that we can find in ethics and other branches of philosophy.

Knowledge in Ethics

Let us consider a moral statement: "Killing innocent civilians is wrong." Such a statement would probably be true for most rational beings, but not for everyone, as examples taken from wars can show. It is neither tautological, true solely because of the meaning of its terms, nor empirical because it does not make an assertion about any physical object and cannot be verifiable by sense-experience. Since, in light of positivistic epistemology, statements have meanings only if they are either tautological or empirically verifiable, it follows that the statement "Killing innocent civilians is wrong" is meaningless. Its significance is limited to evincing moral disapproval. It is denied the status of knowledge.

But is this correct? Is the statement “Killing innocent civilians is wrong” merely an expression of feelings and preferences and not a truthful norm based on knowledge? We know that something is the case if we have reasons to believe that it cannot be otherwise. What are the possible reasons to believe that the statement, “Killing innocent civilians is wrong,” is true; whereas its opposite, “Killing innocent civilians is right,” is false?

Most of us have never seen face-to-face the actual killing of civilians. However, once we accept that human experiences are not incommunicable, and that our thoughts and feelings can be communicated, shared, exchanged and debated, we can understand and share the meaning of the phrase “killing innocent civilians.” It refers to depriving of life and often subjecting to extreme suffering people who are not legitimate military targets and who, being neither combatants nor criminals, are not guilty of anything. Killing innocent civilians is a crime committed in war. If this is so, killing innocent civilians must surely be wrong. Yet, how do we know this? We can speak about moral knowledge when it leads to moral action, but instances of such a crime still occur. As some people say, in war anything goes. Force forms a realm of its own. The killing of civilians is explained by the circumstances of war in which opposing sides, moved by their own interests and zeal for victory, are driven to the extremes and are impatient with all restraint. There are thus individuals who believe that killing innocent civilians is right. Why are they wrong?

There are disagreements about moral issues. For people, who, being driven by their interests, hate others or are indifferent toward them, a moral norm, such as “Killing innocent civilians is wrong,” that obstructs the pursuit of their interests, cannot possibly be anything more than mere words. It will not be for them a true norm. It refers to no experience which they can assimilate as their own and to no value that they can share with others. What is fundamental to an agreement in the realm of both facts and morals is a commonly shared attitude that determines human relatedness to the world as a whole. In science, it is the scientific attitude of being an objective, detached observer. Without this attitude, scientific knowledge would neither be objective nor inter-subjective. In ethics, it is the loving attitude, the attitude of affective engagement. If ethics is about norms of conduct that regulate relationships between persons, and involves knowing persons as persons

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and not as mere objects, then it must have affective attitude as the foundation. Without this attitude, inter-subjectivity and rational consensus in morals are impossible.

The moral statement, "Killing innocent civilians is wrong," is neither a tautology nor an empirical statement. It is different from the factual statement, "In recent bombings 30 civilians were killed and over 100 injured." Its truth does not depend upon empirical verification. However, the statement is not just a meaningless expression of feelings. It is a piece of moral knowledge. It is not factually, but morally, meaningful. Its meaningfulness does not depend upon verifiable facts, but upon its being a true norm which all rational beings whose attitude is love will accept. This statement is both meaningful and true because, once we understand, in the context of reciprocal communication of our experiences, what killing innocent civilians means and what it implies, we can say with full conviction that it is morally wrong and it can never be right.¹⁹

Conclusion: Knowing Beyond Science

In our times science is held in high regard. It is believed that it offers the best possible route to knowledge not only of natural but also of social phenomena. The assumptions and methods of the natural sciences are applied to the study of human beings whose consciousness is explained in psycho-chemical terms. What remains largely unquestioned about science today, however, is its objectivity. The objectivity of scientific research is not free from subjectivity. Objective, scientific knowledge is based on indifference, the state of mind that constitutes scientific attitude. Science looks at the world objectively, indifferently as if it were a physical object, but in fact the reality is not that. To look at things as if they were mere objects is a way of relating to them from a certain perspective and can lead to their being known only in part. Scientific knowledge is thus a partial, objective knowledge. Only by assimilating things and persons to objects can it claim to know them.

"The only way to full knowledge lies in the act of love."²⁰ Love,

¹⁹ The deliberate killing of civilians is murder and military commanders who order, encourage or tolerate such murder are fully responsible for it. They must take steps to avoid and limit even unintended civilian deaths. But in extreme war conditions killing innocent civilians may sometimes be unavoidable. See Michael Walzer, *Just and Unjust Wars* (New York: Basic Books, 1977), 316-325.

²⁰ Fromm, *The Art of Loving*, 26.

affective engagement, gives the possibility of knowing someone or something fully and not only as an object. What kind of status does such knowledge have? Once we accept that our experiences, thoughts and feelings are not incommunicable, we can arrive at inter-subjective and non-objective knowledge which is derived from the rational consensus between individuals who exchange, share and debate their experiences based on loving attitude. There is thus a universal knowledge which goes beyond scientific objectivity, knowledge which results from our recognition of others as persons and our affective engagement with the world.