

PUBLIC LECTURES

I

BERKELEY'S CONCEPTION OF NATURE

DURING the reign of the English Queen Anne, a twenty-one-year-old Irishman in Trinity College, Dublin, wrote: "I do not pin my faith on the sleeve of any great man." It was not impudence in George Berkeley, born two hundred and fifty years ago, that moved him to say this. He lived in an age which, on the one hand, was witnessing the failure of the ideal of a united Christendom, and which in consequence inclined many cultured minds towards fatalism and atheism. On the other hand, the domain of abstract thought was then dominated by the works of the great philosophers Descartes and Locke. And in their dualisms of mind and matter lay the germ of scepticism. If there is a vast realm of material reality totally excluded from the realm of mind, how can mind know matter? In short, certain great men, because of their far-sightedness, had been content to view reality from a distance, and had thereby missed the fine detail in the picture. A closer view would have provided a corrective for false and borrowed preconceptions. Berkeley, modestly admitting his intellectual myopia,¹ claimed to have discovered something which greater genius had overlooked. He had to hold the object close to see anything, and he found the wherewithal to remedy the growing scepticism in religion and philosophy. Therefore,

¹ *Principles of Human Knowledge, Works*, Vol. I, p. 239 (Fraser's edition).

he was not willing to pin his faith on the sleeves of great men. He believed that, by their very greatness, they had raised a dust and thus set themselves and other people to complaining that they could not see. So, as a young mind "not yet debauched with learning," he assigned himself the task of clearing the atmosphere.

Everyone has heard the term "Berkeleyan Scepticism," and many believe that it properly names his philosophy. But those who catch the point and spirit of his thinking know that it is an absurd misnomer. Berkeley's main concern was not to establish scepticism, but to demolish it. And if in any sense he can be called a sceptic, it is the sense in which the person who doubts the existence of human quadrupeds is called sceptical. Obviously, if you take a man to be a rational quadruped, you must doubt the existence of man. This, as we shall see, is precisely the sense in which Berkeley is sceptical of the existence of a material world. Matter *as misconceived* is indeed dubitable. But such scepticism, being engendered by misconception only, is neither necessary nor natural. And Berkeley believed that the scepticism of his day was of this nature—something to which a natural end might be put simply by getting ideas of things as they are.

Now I am going first to describe nature as it was generally conceived in the English-speaking world at the beginning of the eighteenth century; indicating also the sceptical implications of this view. Then, beside it, I shall build up Berkeley's conception of nature. In the light of the contrast, I hope to impress you with the force of some of Berkeley's arguments.

The majority of reflective persons, under the spell of Newton and Locke, looked upon nature as a system of inert bodies existing in absolute space and time. These bodies are made up of small bits of dead matter called atoms and their properties are solidity, mass, motion, size, shape, abso-

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lute place, absolute date, and number. In the course of their motion, they suffer impacts, and then *some* of them have sensations. Those having sensations are called "organisms." Sensations occur "in" these organisms or in the minds which permeate them. There are hot and cold sensations, sweet and sour ones, red and blue. These and the like exist only in the mind of the organism and represent nothing outside it. They are called "ideas" or "images." But there are also moving images, big and square ones, sensations of solidity, and the like. These in respect of their size, shape, motion, etc., though also existing in the mind, represent real physical properties of matter in the external world of nature, whose existence is in no way dependent on minds. By means of such ideas or images, we "know" the physical nature of things.

Now we shall imagine Berkeley asking Locke some questions concerning this view.

Berkeley: Why locate such qualities as color and sounds and smells in the mind and allow them to represent nothing?

Locke: Because they are relative to and dependent on the observing mind. Two persons looking at the same object would not get exactly the same color-sensation. Therefore color is not in the object but in the mind only.

Berkeley: But would two persons perceive exactly the same shape?

Locke: No, not immediately.

Berkeley: Then why not give shape the same status as color or sound or smell, making *all* perceived properties dependent on mind?

Locke: Because the real physical shape may be determined by reasoning.

Berkeley: Why cannot the real physical smell of a body be likewise determined?

Locke: I prefer you to ask me another question.

Berkeley: Good. Can you imagine a surface without any color whatsoever?

Locke: No.

Berkeley: Then when you speak of colorless surfaces of solid bodies, you have no idea of what you are talking about?

Locke: I have an abstract idea of it. Simply abstract the color from the surface by an intellectual act of analysis and what is left is the real physical surface.

Berkeley: But I find that when I mentally abstract the color, I take with it also the shape of the surface, since it is the outline of the patch of color which constitutes the shape. And surface without a shape is indeed a queer entity. One might as well argue that he has an abstract idea of square circles and that, though unimaginable, they exist in nature.

Locke: But we have sensory evidence of the existence of surfaces.

Berkeley: Not of *colorless* surfaces. Only of extended patches of color, or of warm or cold tangible surface. Now, I presume you have an idea of matter?

Locke: An abstract idea. When you mentally abstract all the qualities of matter, the x which is left as a bearer of these properties is matter. I confess I don't know what this material x is in essence.

Berkeley: Then what you directly perceive is not matter, but certain qualities only?

Locke: Yes.

Berkeley: If there is no sensory evidence for the existence of this unknown material substance, why in the name of heaven believe that it exists?

Locke: We must posit *something* as the external cause of the sensations in our minds.

Berkeley: To be sure, but why posit matter as you have

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defined it? If matter is genuinely to cause anything, it must be active, and according to you it is completely passive and inert, even when in motion. Furthermore, will you explain how matter in motion causes a *sensation* in a living organism?

Locke: A sensation is somehow or other annexed to the motions of particles in the brain, but I cannot describe the details of the process.

Berkeley: It appears, Locke, that in positing the existence of material substance as you have conceived it, you have presented yourself with a white elephant. It is an *inactive cause*, it "causes" sensations in an unknowable manner, and is itself in essence unknowable. You are logic-bound to be a sceptic as regards the existence of material substance. And when I squeeze your "abstract ideas" of it for the juice of their meaning, not one little drop do we get out of them. Why not leave this theoretically useless substratum out of our picture of nature, and paint another one? Besides fostering scepticism in philosophy, your material substance breeds atheism in the field of religion. It is a brute, blind somewhat, unknowable and oppressive, filling man with a sense of being huddled about by thoughtless and careless natural forces. Perhaps we can portray nature more truly, not by excluding *matter* from the picture, but only what scientists and philosophers call material substance. . . .

Berkeley, at the age of twenty-five, and twenty-four years before he became Bishop of Cloyne in Ireland, did paint another picture, and a very beautiful one. Whether it represents reality—i.e., whether it is true—I shall let you judge. I propose now to exhibit Berkeley's conception of nature, developing it not exactly as he did, but in a manner calculated to draw sympathetic attention to what he took to be the most important points. Berkeley's world-view appears bizarre to him who simply stares at it unreflectively. Berke-

ley's readers and critics for a hundred years entirely missed the point of his philosophy, and, according to the general estimate, the speculative side of him was freakish—except in the medical part of his treatise on tar-water. The famous theologian, Samuel Clarke, would not even argue with him. When, thanks to his friend Swift, his philosophy of nature was introduced to English circles, a certain physician is reported to have become anxious about Berkeley's mental health. There is a story about Swift himself, according to which Swift, when Berkeley came to see him on a rainy evening, let him stand outside the closed door, since, if Berkeley were right about the nature of physical objects such as doors, he should be able to pass through them closed as readily as open. All of which shows how much Berkeley was misunderstood, and how important it is to strip ourselves of stiff preconceptions to be able to follow the lead of his supple and vigorous thinking.

Since Berkeley's doctrine is, in brief, that only minds and their ideas exist, that physical nature is nothing but a patchwork of ideas or sensations "in minds," we shall begin by a careful inquiry into the meaning of the phrase "in the mind," to show how conceivable, even reasonable, Berkeley's view is.¹

Imagine your organism standing on an open plain and gazing across it at a blue range of mountains. You observe between your imagined body and the imagined mountains a distance of some sixty miles, and there are clouds which seem still farther away. Now if you were asked, where is this imagined scene, with its forms and colors, would you not say that it is in your mind, and that those clouds and

¹ Berkeley's failure to analyze and define the properties of the relation "in" where it is one of *mental* inclusion is a main weakness of his philosophy. See his comment in the *Principles, Works*, Vol. I, p. 284.

hills and plain and gazing organism have no reality outside your mind? I think you would, and I suspect the answer is in some sense true. Now open your eyes and perceive your own bodies, and the desk and the chairs before you, and the blackboard. Again there is a case of an organism gazing at something at a distance from it. But if you were asked where this second system of experienced objects exists, I take it you would deny that they are in your mind or in anybody else's. It is preposterous to suppose that these real physical things exist in minds. Their status, you argue, is absolutely non-mental. But what makes you think so? Is it because you perceive them at a distance from and outside your organism? If so, then why not say the imagined mountains are outside your mind, since they too were observed to be at a distance from your imagined organism. If it is highly conceivable that the whole imaginal situation is in the mind, why not the perceptual, also? The only difference between the imaginal and perceptual situations seems to be that the perceptual is a little more stable, a little more fixed. And that by itself is no reason to think it is independent of and outside the mind. Situations existing only in the mind may, for all we know off-hand, be as stable as you please.

This is the significance of the phrase "in the mind," as Berkeley uses it, and let us grasp it to begin with, even before we examine Berkeley's arguments to show that the material world is "in," and dependent on, mind. Otherwise, we too, are likely to look upon his whole enterprise as initially and finally freakish. We simply must not forget that, just as it is good sound sense to say that a vast panorama of *imagined* things exists in the mind, so the assertion that *perceived* things exist only in minds may also be far from absurd, and may even be true. *But*, someone may object, the proposition

that perceived objects are in the mind has queer implications. For example, when a man beholds the moon more than two hundred thousand miles away, does not his mind become more than two hundred thousand miles long, if this distance-interval is in his mind? By no means. *Imagine* yourself looking at the moon. Again you have the same distance between you and your object. And you admit that this whole imagined situation is in your mind. Does that imply that your mind must be as long as the imagined distance? No. Then, for all we as yet know, *perceived* distance may also be in the mind without odd consequences for mind, just as a sound-sensation is admittedly "in" the mind without making the mind itself noisy. We have first-hand evidence in the case of imagination that an apparently spatialized system of things may be in the mind without thereby causing the mind itself to acquire their spatial characteristics. The same may be true in the case of sense-perception. Indeed, there is a fund of evidence which purports to show that physical nature, as experienced in *sense-perception*, really does exist, without residue, only in mind.

Since we are already familiar with the arguments in favor of the doctrine that what is perceived depends upon perspective and that therefore perceived nature does not exist absolutely but only relative to this or that perceiving mind, I am not going to belabor the point here. Berkeley leans heavily on this argument from characteristics being what they are only relative to minds. Perceived mass, motion, change, shape, size, color, sound, etc., all depend on the point of view and the "frame of mind" to which they are given as objects of experience. Their "reference-frame" is always some mind. To try to conceive any one of them as being *the* real and absolute quality of a thing is to engage in the fruitless exercise of formulating an "abstract idea."

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Rather than retrace these arguments step by step,¹ I shall sketch certain conclusions to which they directed Berkeley, particularly with reference to matter, space, and time. This will lead on to his theory of Divine Visual Language and of the relation of the physical world to God and ourselves.

We turn first to matter or to the meaning of the term "material thing." Perhaps you have already felt the urge to remark, in connection with Berkeley's wholesale relegation of perceived qualities to the realm of mind, that beyond this variable screen of sensory appearances lies a constant something which itself is not mind-dependent and to which the variable qualities are said to belong. Behind the fabric of shifting sensations or mind-dependent images—Berkeley calls them "ideas"—lies a constant extra-mental reality. And this, you say, is the realm of matter and of material things. Now Berkeley is willing to admit a reality behind sensory appearance, as we shall see, but he has good reasons for refusing to call it material, or a system of physical nuclei to which the perceived qualities are ascribed. Only one devastating difficulty which arises from such a conception need be mentioned. If these so-called material things exist outside minds, but all their perceived properties exist only in minds as has been proved, have you not an extremely queer divorce between qualities and the physical things they are said to qualify? And what could such physical things possibly be as divested of all known properties? There is no answer, and scepticism with regard to the nature and existence of physical things *as outside mind* seems to be the result. It is you, if you entertain this conception of matter, who must turn skeptic. But Berkeley is not willing to be sceptical about the existence and nature of material things. He is not going to think of men as quadrupeds and then be

¹ See *Three Dialogues Between Hylas and Philonous, Works*, Vol. I.

forced to doubt that there are men. Rather, he is going to investigate the status of physical objects more closely and get a notion truer than the old "abstract idea" of them, in the light of which new conception scepticism will lose its *raison d'être*.

A material thing, for Berkeley, is simply a "congeries" or collection of sensations and images, where "sensation" means something immediately sensed. Thus, physical objects are directly perceived by the senses. Instead of lying mysteriously behind sensory appearance, through which veil one must reach by the groping arms of inference, they are immediately exposed in sense-perception. For example, an apple is *nothing but* the round and the red and the cool and the sweet you become aware of when you see, touch, and taste it. Eventually, experience teaches you to associate, in imagination, certain other qualities with those directly sensed, such that when you merely look at a certain conjunction of the visual qualities "round" and "red", your imagination supplies the unseen qualities "sweet", "solid", etc., and you say that you "see" an apple; though all you literally see with your eyes is a patch of color in a certain light. This whole complex of perceived and suggested qualities is identical with the apple, and the material thing in this case is just this aggregate of qualities. But do not at least some of these qualities "belong to" some x , which latter is the physical object? Berkeley's answer is negative. Qualities refer to and connect up *with one another* to form a kind of system, but the whole system does not itself refer or belong to a material nucleus called the apple. The system of qualities is sufficient in itself to constitute the material thing.

Now, if such is the nature of physical objects, who can be doubtful about their nature or existence? That they exist, and what they are, becomes immediately evident in ordinary

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sensory experience. Simply to be awake is to be convinced of both. *If* this is what "material thing" means, then indeed it may be granted that we know a good deal about matter and material things. But the new conception stimulates questions, which we shall ask Berkeley. It appears that physical nature is in one absolute space, and a public object of knowledge. But according to the view that material things are only sensations or ideas, nature is resolved into as many private worlds in private spaces as there are minds. Is not this absurd, that every mind contains its own little physical nature within itself, including the space in which that nature appears? Berkeley answers that there is indeed no absolute space. Stripped of all particular sizes, shapes, moving bodies, etc., space is nothing but a meaningless abstract idea. All immediately perceived spatial properties such as size and shape, together with distance and motion, are demonstrably relative to mind, and their relativity infects the whole of space. Berkeley is speaking psychologically here, and his opinion is confirmed by recent work in Gestalt psychology. And spatial magnitudes in perception depend on such qualitative factors as light and shade, etc., none of which is absolute. *Your* space is not *my* space, and neither you nor I have ever perceived a space including both. There may be something including us and others like us, but there is no evidence proving that this something is space. You must not assume that space is the only entity which can include things. Mind too is capable of including, though in a sense more difficult to define. For example, if you have an alert mind, it is "full" of suggestions. It contains or includes suggestions, though not as a drawer contains pieces of chalk. Is it not possible that the all-inclusive something which you mistake for space is a mind—the infinite mind of God in which we live, move, and have our being, much as,

for example, suggestions exist “in” our finite minds? We shall see later how Berkeley develops this notion. I mention it here for the light it throws on his conception of space. Minds are not in space, but spaces are in minds. Minds are not in skulls, but skulls are in minds. Hence, minds are not separated from one another by *spatial intervals* as skulls are, but by a kind of non-spatial otherness.¹ You cannot measure the interval between your mind and my mind by a yardstick. The interval between them is somewhat like the interval between two movements of a symphony, and that certainly is not spatial distance. Space with the clear-cut intervals it has as object of vision, turns out to be a “waking dream”, to use a phrase Berkeley borrowed from Plato; and “high” and “low” even in the field of vision are ultimately as metaphorical as when applied to musical notes. Berkeley does frequently use the term “*real* distance”, but such “distance” is never the object of sight and, upon analysis, resolves itself into the sort of non-spatial intervals which subsist between sensations in a temporal series. For example, the real distance of a fire seen as at about a mile from your organism is not this *visualized* interval, but rather is it the interval between a certain yellow color sensation—“seeing” the fire—and the sensation of warmth you have when, as you say, you “approach” the fire. And this interval between a color- and a temperature-sensation is obviously not visualized distance.

We have just used the adjective “temporal”, and that raises the question of time. Is there an absolute, mathematical time, as Newton believed? Again Berkeley’s answer is negative. Time is nothing but sequences of sensations in minds, hence there are as many times as there are minds. When a certain sequence of ideas or sensations is imme-

¹ Berkeley calls it “alterity”. *Siris, Works*, Vol. III, p. 282.

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diately *felt* as rapid, then real time literally "flies," since sequences of ideas *constitute* time. The notion of absolute time, moving with majestic regularity in all quarters of the universe, is the result of meaningless abstraction. The life of a fly is as long as the life of a man, if only the sensations in each creature are felt as constituting a considerable temporal span. Felt or sensed sequence is the only real time.

Let us ask Berkeley another question. Physical or perceived nature, as distinct from merely imagined nature, is regular, orderly, "cosmic" in the Greek sense of the word. To account for this fact, we are obliged to ascribe causal properties to material things, whereby one thing *necessitates* something else and thereby brings rational order into nature. Causation, as a system of physical forces *in material objects*, must be recognized. But, if physical objects are just collections of sensations, how can one thing be said to cause or necessitate something else, and what becomes of the uniformity of nature?

Berkeley is ready with an answer. Show me, he challenges, one case of *necessary* causal connection between material things or so-called events in physical nature. You will and can never find any such instance. The best you can do is to point to certain events which, so far as we know, have always occurred in conjunction. But this is no proof that they will continue to be thus correlated, or, in short, that the relation between them is one of necessary connection. We have never perceived any such relation in the physical world, such that natural uniformities must be traced to supernatural agencies. This fact of the absence of strictly causal relations between things recommends itself to us when we analyse, as we have done, the nature of material things. They reveal themselves to us, according to Berkeley, as wholly passive or inert complexes of sensations or percepts. We

never sense one sensation or group of such as acting upon another.¹ Not one of them is really causally operative, "making" others by its own agency. If Berkeley lived in our day, he might cite moving pictures as evidence of this thesis. It appears, on the screen, that certain things are acting upon others to make them behave as they do, but we know perfectly well that between one colored figure on the screen and another there is no real causal relation. So in ordinary perception of material things. These are made up of sensations, visual and non-visual, none of which really causes another. The whole panorama of physical nature is just a tissue of *effects*, in themselves totally incapable of activity.

It is interesting to think that the upshot of this view is in accord with the findings of quantum theory in recent physics, which asserts that between events in nature there is no real interaction, no strict or dynamic causation, but only correlations or coexistences, on the basis of which certain general averages are statistically obtained to serve as the "causal laws" of nature. Berkeley would have been delighted to learn that physicists, by their own machinations, had chanced across such a view of physical causation, with the category of *physical force* ruled out. This positivistic tendency in present-day science is what Russell had in mind when he said that modern physics is becoming less "muscular" and more "visual". Physical force is something the mind is tempted to read into material things, on the analogy of its own volitional experience of energy. But the cautious scientist, according to Russell and Berkeley, will content himself with mere correlations as laws of nature. Physics can get along without the concept of physical agency.

Now Berkeley has called nature a system of effects, and effects imply causes. Though there are no active causes *in*

¹ *De Motu, Works*, Vol. I, pp. 501-504, *et passim*.

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physical nature, there are, he argues, active causes *of* physical nature. Genuine causal relations exist, not between material thing and material thing, but between mind and material thing. But obviously *our* minds have not willed or caused the existence of such things as a perceived river or mountain, though they may be responsible for a purely imagined one. What mind, then, is responsible for the perceived world called physical nature?

As we noticed before, Berkeley subscribes to the general belief in *something* behind sensory appearances, something other than our own minds, though he denies that it is matter. Behind or beyond the webs of cosmic appearances which constitute physical nature is not matter, but Spirit or Mind, and it is God's infinite mind. At last, we come to something genuinely capable of causal action on a grand scale. Of mind's capacity to act, we have immediate evidence in the case of our own minds. We are capable of willing, thinking, imagining, which activities produce the common effects we are all acquainted with. Mind can *do*, it can create. Just as, by our own volition, we can create images or a whole imaginary world, so God, by exerting his will directly upon us or causally affecting us by his divine activity creates the sensations in us which we call the physical world. This is the world we become aware of in sense-perception, and the reason for the prevailing belief in its permanence and public status is now clear. We ourselves are not the cause of physical nature. God causes it in our minds—in the previously defined sense of "in"—by operating upon us from without, in the non-spatial sense of "without". The uniformity of nature is simply the result of God's resolution or inclination to persist in certain general kinds of activity, affecting his creatures—us finite minds—by the same "powers" in his infinite mind, and thus establishing a unified society and a basis

for communication.¹ For example, if two of us should plan to meet a week hence at this hour, the eventual agreement between the two time series in the two minds involved would be due not to a single time-system common to both, but to God's having resolved to affect these minds with similar sequences of sensations of light and dark (day and night). And so there is cosmos instead of chaos, despite the fact that there is no single *physical* world which includes us all. What includes us all, in the peculiarly mental sense of inclusion, is the spirit of God, not inanimate nature.

According to Berkeley, you have less reason to doubt the existence of God than the existence of other finite spirits such as yourselves. This part of his argument is perhaps the most original, and sheds considerable light on his natural philosophy. If my presentation of it fails to win your sympathy, you may be sure that it is not Berkeley's fault. Berkeley said he wrote books not to force men to his conclusions but rather to make them think. The purpose of this lecture is to induce you to read Berkeley's works. You will find there, in *Alciphron*, a theory of divine visual language which will incline you to dwell with it in thought, with no sense of time wasted. I shall, in conclusion, commend this theory to your judgment.

What evidence have I of your existence not as a material thing but as a spirit or mind? The fact that I see what I call your face and apparently the light of speculation in your eyes does not demonstrate your existence as a spirit, but only as a material thing. I would experience a skillfully constructed robot in exactly the same manner. But if I do not take you to be a robot, it is because you address me in conventional symbols. You speak to me in words whose

¹ Whether one finite mind directly acts upon another is an open question for readers of Berkeley. See G. Dawes Hicks: *Berkeley*, p. 148.

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meaning experience has taught me. You are capable of using a language significant by convention, to express your intentions and to otherwise inform me. That is why I believe that accompanying the complex of qualities I take to be your body is a mind and that this mind is essentially you.

Now notice the main characteristics of the language by means of which mind communicates with mind. In the first place, words rarely mean things by being similar to them. The written or spoken word "man", for example, is not *like* men or human nature. Similarity of sign and thing signified plays little or no part in linguistic symbolism. Secondly, there is no necessary connection between sign and thing signified. There is nothing in nature which logically or physically requires the visible or audible mark "man" to be conjoined with what it means. In the third place, language is a convention which minds institute by fiat of will. And fourthly, it must be *learned*. When you hear or see a Greek word for the first time, you do not know what it means. You must, by experience, learn the meanings of the words in any language.

If you will grant that anything which has these four characteristics is a language, Berkeley can prove that the whole of visible nature is a language, and the language of a powerful benevolent spirit which you should be willing to call God. I think we need take only one example to drive Berkeley's argument home.

When, as infants, we first saw a wavering yellow patch of color, we did not know what this color-sensation was or meant. So we put forth our hands to get a tactual sensation. The result was painful. We were badly burned. Thus we learned the meaning of the color or visual sensation, and came to recognize the whole complex of sensations as flame or fire. Later, the association in our minds of the color-

sensation with certain other sensations became so habitual that we said we could "see" the fire, though, in literal truth, we were visually aware only of a patch of color. We had so perfectly mastered the meaning of the visual sign that we began to confuse it with its various meanings, as we look straight through words to their meanings when we master some language. Furthermore, those visual sensations so regularly meant or accompanied the other sensations that we were inveigled into the belief that there was a necessary connection between them.

But let us stop to analyze the situation. Firstly, is there really a *necessary* connection between the yellowish patch of color and the sensation of being burned? It seems, rather, that we have simply closely associated the two ideas because they have so frequently occurred together. Analysis reveals that the occurrence of the one does not imply, by its very nature, the occurrence of the other. So one of the requirements of a language is here fulfilled: there is no *necessary* connection between the color as sign and the temperature or tactual sensation as thing signified. Secondly, did we not have to learn, by experience or practice, the meaning of the objects of sight? We did, and this satisfies another requirement of a language. Thirdly, is a visual sensation or color-patch similar to the non-visual sensations which it stands for? Plainly, it is not, and so we have here a third characteristic of a language, namely, no similarity of the meaning-term to the thing meant. The fourth characteristic, that language is a system of arbitrary¹ symbols established by fiat of will, also belongs to sensed colors, or to the immediate objects of vision. This may not seem so clear to us, but it follows from what Berkeley claims to have already proved. The colors

¹ Notice that though a system of entities is "arbitrary", it may nevertheless be regulated and orderly. Thus is visible nature at once arbitrary and systematic, dependable.

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which our sense-perceptions of a mountain reveal are obviously not the result of our own volitional activity, nor of the will of any human spirit. Yet those color sensations must be the result of some volition or mental operation, since it has been shown that matter cannot produce mental phenomena such as sensations. Therefore, there must be, as author of the whole visible world of colors, some great Personality beyond it which produces visual sensations in us by fiat of will. The whole system of visible nature is, consequently, nothing but an arbitrary institution, a divine visual language, in terms of which God speaks to us. And the physical sciences, inasmuch as they formulate and generalize the correlations between our sensations, are simply the grammar of God's language.¹ Their function is to formulate its grammatical rules which we call "laws of nature", and thus make clear to us how the occurrence of certain things "means" the probable occurrence of certain other things. Even when the scientist peers through a microscope into what he calls a physical thing or event, he is simply acquiring a deeper insight into God's vocabulary by having new sensations. God then addresses him in novel terms whose meanings or correlations he learns by experience.

The divine visual language signifies in two dimensions: in the physical and in the spiritual. In the physical dimension, the meaning of the language instructs us as to physical consequences. For example, a red round visual sensation means that, if you will to proceed in a certain manner with reference to it, you will get cool and sweet sensations as a consequence, the aggregate of which qualities is, by us, called an apple. Or, a patch of yellow may mean that if you proceed thus and so, you will be burned. Thus God speaks in the physical dimension. But His language betrays His inten-

¹ *Works*. Vol. I, p. 318; Fraser's note.

tions, besides merely indicating physical consequences, and this is its spiritual or "affective"¹ significance. He who is concerned to tell you from your infancy that the result of certain modes of behavior is pleasant or painful must be a loving person or mind. And thus God tells us of Himself, that He is love, and so forth.

Clearly then, if Berkeley's theory of divine visual language is correct, we do have more evidence of God's existence than of the existence of each other, since all visible nature bespeaks the presence of God, whereas we betray our presence as spirits to each other only by comparatively few words. We read God's language everywhere and whenever our eyes are open, but we read or hear one another's language only during a small portion of conscious experience. And language alone demonstrates the existence of minds.

To put a finishing touch to Berkeley's conception of nature, I shall say a word in answer to the question, how does the physical world look to God, according to this conception of it? The answer, though difficult because not quite clear on Berkeley's own premises, is nevertheless important, since it requires us to put our fingers on the central nerve of Berkeley's philosophy of nature.

In one sense, God has no experience of a physical world. It does not exist for Him.² When God, as pure spirit or volitional activity, operates as He pleases upon us, then sensations in the narrow limits of *our* minds arise, and the panorama of these constitutes physical nature. We experience these sensations as a *physical* world, since, to us, they

¹For the affective or "feeling" values of sense-data, see Hartshorne's comments on Berkeley: *Philosophy and Psychology of Sensation*, pp. 91-94.

²F. D. Mabbot in "The Place of God in Berkeley's Philosophy" (*Jour. Philos. Studies*, 1931, p. 18 et seq.) conclusively shows that Berkeley simply could not have meant to say that physical nature is perceived and supported by God's mind, as our finite minds perceive and support it.

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are "objective" in the sense of not being the result of our own imagination. But nothing operates upon God, to give rise in Him to physical sensations. He is all-inclusive. Thus if God is aware at all of what *we* call the material world, He cannot experience it as material or objective, independent of His will. He is its creator. Hence it would seem that if He is in any sense aware of our sensations—and Berkeley is not clear about this—they must appear to Him as objects of imagination appear to us. God could change the whole *natural* scene by a mere act of imagination even as we can create in imagination what we please; and if He does not actually do so, it is because His divine nature is predisposed towards constancy. External to the realm of *our* imagination is the realm of sense-perception, the "real world" as we call it. But God knows the curb of no such external world. Everything is subjective to Him, in the sense of being the immediate product of His divine mind.¹

Finally, Berkeley's conception of nature lies completely before us—complete, if we do not, as we shall not here, take into account *Siris*, a treatise he wrote in the evening of his life. The picture of nature we have surveyed is well conceived, but in many respects it is perplexing. This conception of a material world without material substance, of a physical nature existing as sensations only in the realm of mind, attracts a swarm of questions which vex us. Such vexation, however, being intellectual, is thoroughly wholesome, and I shall leave you with questions swarming about you. The exercise of clearing the air of intellectual flies develops the kind of muscles which may enable you to grasp

¹ At the very beginning (*Common Place Book, Works*, Vol. I, p. 60) and at the very end (*Siris, Works*, Vol. III, p. 289) of his intellectual life, Berkeley wrote that in the last analysis, only *persons* exist. "All other things are not so much existences as manners of the existence of persons." This is a decision in favor of God's point of view.

some new truth. And Berkeley, though convinced of the truth of his general theory of nature, wanted very much to make men think, whether or not they arrived at his conclusions. He succeeded so well in making men reflect for themselves that David Hume, born when Berkeley was twenty-six years old, developed, on a Berkeleyan basis, an argument which claimed to prove that, even as we have no *knowledge* of material substance, so are we ignorant of the existence of mind as spiritual substance. And both philosophy and science in our own day are reverberating with attempts either to refute or to prove Berkeley's argument that mind cannot be assigned a place in physical nature since the place of nature is in mind. Englishman Locke, Irishman Berkeley, and Scotchman Hume constitute a philosophical triangle whose properties are as eternal as those of any triangle in geometry.

VIRGIL C. ALDRICH.