only intuited by us as it appears to us, not as it is in itself,” could indeed be granted, but into which we could have no insight at all.

§13

All those who cannot yet get free of the conception, as if space and time were actual qualities attaching to things in themselves, can exercise their acuity on the following paradox, and, if they have sought its solution in vain, can then, free of prejudice at least for a few moments, suppose that perhaps the demotion of space and of time to mere forms of our sensory intuition may indeed have foundation.

If two things are fully the same (in all determinations belonging to magnitude and quality) in all the parts of each that can always be cognized by itself alone, it should indeed then follow that one, in all cases and respects, can be put in the place of the other, without this exchange causing the least recognizable difference. In fact this is how things stand with plane figures in geometry; yet various spherical figures,⁶ notwithstanding this sort of complete inner agreement, nonetheless reveal such a difference in outer relation that one cannot in any case be put in the place of the other; e.g., two spherical triangles from each of the hemispheres, which have an arc of the equator for a common base, can be fully equal with respect to their sides as well as their angles, so that nothing will be found in either, when it is fully described by itself, that is not also in the description of the other, and still one cannot be put in the place of the other (that is, in the opposite hemisphere); and here is then after all an inner difference between the triangles that no understanding can specify as inner, and that reveals itself only through the outer relation in space. But I will cite more familiar instances that can be taken from ordinary life.

What indeed can be more similar to, and in all parts more equal to, my hand or my ear than its image in the mirror? And yet I cannot put such a hand as is seen in the mirror in the place of its original; for if the one was a right hand, then the other in the mirror is a left, and the image of the right ear is a left one, which can never take the place of the former. Now there are no inner differences here that any understanding could merely think; and yet the differences are inner as far as the senses teach, for the left hand cannot, after all, be enclosed within the same boundaries as the

⁶ A spherical figure is one inscribed in the surface of a sphere.
right (they cannot be made congruent), despite all reciprocal equality and similarity; one hand’s glove cannot be used on the other. What then is the solution? These objects are surely not representations of things as they are in themselves, and as the pure understanding would cognize them, rather, they are sensory intuitions, i.e., appearances, whose possibility rests on the relation of certain things, unknown in themselves, to something else, namely our sensibility. Now, space is the form of outer intuition of this sensibility, and the inner determination of any space is possible only through the determination of the outer relation to the whole space of which the space is a part (the relation to outer sense); that is, the part is possible only through the whole, which never occurs with things in themselves as objects of the understanding alone, but does occur with mere appearances. We can therefore make the difference between similar and equal but nonetheless incongruent things (e.g., oppositely spiralled snails) intelligible through no concept alone, but only through the relation to right-hand and left-hand, which refers immediately to intuition.

[4:287]

Note I

Pure mathematics, and especially pure geometry, can have objective reality only under the single condition that it refers merely to objects of the senses, with regard to which objects, however, the principle remains fixed, that our sensory representation is by no means a representation of things in themselves, but only of the way in which they appear to us. From this it follows, not at all that the propositions of geometry are determinations of a mere phantasy of our poetic phantasy, and therefore could not with certainty be referred to actual objects, but rather, that they are valid necessarily for space and consequently for everything that may be found in space, because space is nothing other than the form of all outer appearances, under which alone objects of the senses can be given to us. Sensibility, whose form lies at the foundation of geometry, is that upon which the possibility of outer appearances rests; these, therefore, can never contain anything other than what geometry prescribes to them. It would be completely different if the senses had to represent objects as they are in themselves. For then it absolutely would not follow from

7 The word "phantasy" refers to the faculty of imagination.
the representation of space, a representation that serves a priori, with all
the various properties of space, as foundation for the geometer, that all
of this, together with what is deduced from it, must be exactly so in na-
ture. The space of the geometer would be taken for mere fabrication and
would be credited with no objective validity, because it is simply not to be
seen how things would have to agree necessarily with the image that we
form of them by ourselves and in advance. If, however, this image – or,
better, this formal intuition – is the essential property of our sensibility
by means of which alone objects are given to us, and if this sensibility
represents not things in themselves but only their appearances, then it
is very easy to comprehend, and at the same time to prove incontrovert-
ibly: that all outer objects of our sensible world must necessarily agree,
in complete exactitude, with the propositions of geometry, because sensi-
bility itself, through its form of outer intuition (space), with which the
géometer deals, first makes those objects possible, as mere appearances.
It will forever remain a remarkable phenomenon in the history of phi-
losophy that there was a time when even mathematicians who were at
the same time philosophers began to doubt, not, indeed, the correctness
of their geometrical propositions insofar as they related merely to space,

but the objective validity and application to nature of this concept itself
and all its geometrical determinations, since they were concerned that
a line in nature might indeed be composed of physical points, conse-
quently that true space in objects might be composed of simple parts,
notwithstanding that the space which the geometer holds in thought can
by no means be composed of such things. They did not realize that this
space in thought itself makes possible physical space, i.e., the extension
of matter; that this space is by no means a property of things in them-
selves, but only a form of our power of sensory representation; that all
objects in space are mere appearances, i.e., not things in themselves but
representations of our sensory intuition; and that, since space as the géo-
metr thinks it is precisely the form of sensory intuition which we find
in ourselves a priori and which contains the ground of the possibility of all
outer appearances (with respect to their form), these appearances must
of necessity and with the greatest precision harmonize with the proposi-
tions of the geometer, which he extracts not from any fabricated concept,
but from the subjective foundation of all outer appearances, namely sen-
sibility itself. In this and no other way can the geometer be secured,
regarding the indubitable objective reality of his propositions, against all
the chicaneries of a shallow metaphysics, however strange this way must seem to such a metaphysics because it does not go back to the sources of its concepts.

**Note II**

Everything that is to be given to us as object must be given to us in intuition. But all our intuition happens only by means of the senses; the understanding intuits nothing, but only reflects. Now since, in accordance with what has just been proven, the senses never and in no single instance enable us to cognize things in themselves, but only their appearances, and as these are mere representations of sensibility, “consequently all bodies together with the space in which they are found must be taken for nothing but mere representations in us, and exist nowhere else than merely in our thoughts.” Now is this not manifest idealism?

Idealism consists in the claim that there are none other than thinking beings; the other things that we believe we perceive in intuition are only representations in thinking beings, to which in fact no object existing outside these beings corresponds. I say in opposition: There are things given to us as objects of our senses existing outside us, yet we know nothing of them as they may be in themselves, but are acquainted only with their appearances, that is, with the representations that they produce in us because they affect our senses. Accordingly, I by all means avow that there are bodies outside us, that is, things which, though completely unknown to us as to what they may be in themselves, we know through the representations which their influence on our sensibility provides for us, and to which we give the name of a body – which word therefore merely signifies the appearance of this object that is unknown to us but is nonetheless real. Can this be called idealism? It is the very opposite of it.

That one could, without detracting from the actual existence of outer things, say of a great many of their predicates: they belong not to these things in themselves, but only to their appearances and have no existence of their own outside our representation, is something that was generally accepted and acknowledged long before Locke’s time, though more

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*f wissen  
g kennen  
h unbekannt  
i kennen

8 The charge that Kant was a traditional sort of idealist appears in the Garve-Feder review, to which he explicitly responds on pp. 124–30.