

a great part of Berkeley's polemic is completely pointless. Attention belongs to those facts of mental life for whose explanation psychology has yet done little at all. But we are nevertheless all well enough acquainted with it through inner experience, well enough for the problem of abstraction to be considered as solved as soon as it has been reduced to the phenomena of attention and of the association of ideas, which reducibility the author can scarcely doubt.

The last discussion has led us from Berkeley's negative position on abstraction to his positive one on generalization, from the question about the content of concepts to the question of their extension, as well as to the relation of content to extension, a topic about which considerable confusion frequently still exists even in the newer logic and psychology. It is therefore advisable first to search for some clarity of our own before continuing the examination of Berkeley. If we have once achieved such clarity, then the criticism of Berkeley as well as of his followers will proceed more quickly and with more assurance. And, when it comes to discussing recent contributions we will easily be able to abstain from criticism since the comparison will force itself upon the reader.

Berkeley himself, as we have seen, has given us the point of [199] view from which not only the justification of his major objections

stroke may be accomplished gradually, step by step, and to this end it has always proved easiest and at the same time most profitable to make a critical examination of what has been accomplished the basis of one's own investigation. If, therefore, one of the two abstraction theories which now oppose each other will be thoroughly examined here in the form that has been given it by its first and most prominent proponents, then there is at least some hope that such an investigation may yield something useful not only for the history of philosophy but also for the clarification of the question itself.

[186] Historians have never proved very cautious in contending that a later event was the necessary result of this or that earlier one; indeed, they are accustomed to make assertions of this sort very confidently, as if it were not as a rule most difficult even to make plausible that there actually is some connection. In this respect the facts which, so to speak, provided the impetus for the formation of the modern nominalistic abstraction theory must count as an exception. Whoever brings to mind the characterization of abstract "ideas" given by John Locke in the Fourth Book of his Essay Concerning Human Understanding will, at least today, hardly be able not to think that a reaction, such as the one which occurred soon enough in Berkeley's writings, was plainly unavoidable.

"For, when we nicely reflect upon them," writes Locke,¹ "we shall find that "general ideas" are fictions and contrivances of the mind, that carry difficulty with them, and do not so easily offer them-

Meinong's Hume Studies:

Translation and Commentary

by

Kenneth Barber

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of
Philosophy, in the Department of
Philosophy, in the Graduate
College of the University
of Iowa

August, 1966

Chairman: Professor Gustav Bergmann

Eume Studies

I.

On the History and Criticism of Modern Nominalism

Hume Studies, I.*

[185] There are, unfortunately, only too many questions in psychology for which solutions have been attempted in the most various ways without succeeding in producing a general agreement about the solutions. But fortunately only in a few cases does the disagreement go so far that it extends not merely to the explanation but even to the existence of a psychic phenomenon, as is the case with the question of abstraction. Since Berkeley the question is not only how one arrives at abstract concepts but, rather, whether there are such concepts—what must be established first of all is not what the act of abstraction is like, whether it be a psychic occurrence of its own kind or explainable in terms of one or more other psychic acts but, rather, whether such an act of abstraction is at all possible, whether it does not by far surpass the human capabilities.

The solution of this problem must encounter considerable difficulty if such a long time has produced so little progress. Hardly will an individual today believe that he possesses sufficient strength to eliminate with one blow, as it were, all doubt and controversy in this respect. But what cannot be accomplished at one

*Page numbers at the left margin refer to Wien Akademie der Wissenschaften 87 (1877).

sical or logical parts of concepts does not take place as a matter of fact, as Locke seems to suppose, if, furthermore, one must reject the contradiction Locke postulated, does it really follow that all possibilities of abstraction have been excluded? Can there not be abstract concepts, provided only they have a different origin and also are different from Locke's in that they do not presuppose the conceiving of a contradiction?

That exactly this side of the question eluded the sagacious thinker is to be regretted, the more so since some of his admissions which seem inconsistent with the rest of his statement, had they only been properly developed, might have led Berkeley to a much more satisfactory explanation of the abstraction phenomenon than he could achieve on the way he took.

One of these admissions is most clearly stated as follows:

"I do not deny that [the human mind] may abstract in a certain sense: inasmuch as those things that can really exist, or be really perceived asunder, may be conceived asunder, or abstracted one from the other; for instance, a man's head from his body, colour from motion, figure [193] from weight."¹⁸ The general claim that there are no abstracta is thus subject to remarkable exceptions. To be sure, Berkeley holds that one does not usually employ the word abstraction in this sense, but even that cannot be granted without qualification. If, for instance, one wanted to consider bodies only with regard to figure and color, while neglecting all other properties, e.g., weight, solidity,

etc., then probably no one who did not consider space as an a priori "intuition" would hesitate to call this concept of a body, though less abstract than the geometrical one, yet more abstract than the physical concept of a body. Yet our concept differs from the latter by leaving out everything not directly perceivable by the sense of sight, i.e., by leaving out characteristics which as such can certainly be perceived.

This does not mean that one need to go so far as William Hamilton who, in his Lectures on Metaphysics, borrowing Laromiguière, even speaks of an "abstraction of the senses", explaining this through the statement he quotes from the latter: "As furnished with five different organs, each of which serves to introduce a certain class of perceptions and representations into the mind, we naturally distribute all sensible objects into five species of qualities. The human body, if we may so speak, is thus itself a kind of abstractive machine. The senses cannot but abstract. If the eye did not abstract colours, it would see them confounded with odours and with tastes, and odours and tastes would necessarily become objects of sight."¹⁹ Here the word abstraction is indeed most infelicitously employed. For by abstraction, whether or not there be such a thing, is to be understood a psychic act through which one or more ideas are separated or singled out of a larger [194] complex of ideas. Unless there is first such a complex, one cannot talk of abstraction. Hence, even if one grants what certainly is not obvious, namely, that the causes of the several ideas inhere in a single substance, what is given are complexes of real qualities, but not

selves as we are apt to imagine. For example, does it not require some pains and skill to form the general idea of a triangle, (which is yet none of the most abstract, comprehensive, and difficult,) for it must be neither oblique nor rectangle, neither equilateral, equicrural, nor [187] scalenon; but all and none of these at once. In effect, it is something imperfect, that cannot exist; an idea wherein some parts of several different and inconsistent ideas are put together." What Locke had in mind with these words cannot be in the least doubtful. But by not distinguishing between the extension and the content of the concept triangle, he admittedly burdens the latter with an internal contradiction, and for whoever once followed him so far, nothing was more obvious that to go yet one step further and simply deny the existence of such abstract concepts.

Accordingly, the main emphasis in Berkeley's exposition is on negation. He denies that inner experience gives us knowledge of a psychic process of abstracting² and in view of the principle of contradiction denies the possibility of an abstractum (abstract idea).³ Compared with these two, a third objection, the question of when an individual is supposed to acquire the ability to abstract, which Locke describes as such a difficult operation,⁴ is naturally of much less importance. So far, everything is clear and precise, but the same cannot be said of the way in which he tried to fill the gap thus produced in the explanation of psychic phenomena.

The question is simply: If there are no abstracta, how is

universal knowledge possible? What indeed in this case is to be understood by universality? "Universality," according to Berkeley, "not consisting in the absolute, positive nature or conception of anything, but in the relation it bears to the particulars signified or represented by it; by virtue whereof it is that things, names, or notions, being in their own nature particular, are rendered universal."⁵ Dealing with the epistemological question, we shall of course not be able to treat "general things" in any detail, but we shall instead have to discuss, [188] in more detail, general names and general concepts.

But even if there are no abstract general ideas, general ideas can yet arise in another way. A particular idea becomes general "by being made to represent or stand for all other particular ideas of the same sort."⁶ Hence, the ideas owe their generality to what they designate; one therefore considers them "rather in their relative capacity, and as substituted for others, than in their own nature, or for their own sake."⁷ But, to be sure, we find in Berkeley no explanation of how we are to think of this substitution, or that representation.

This theory of general concepts seems compatible with Locke's assertion about general words: "Words become general by being made the signs of general ideas."⁸ But Berkeley opposes this view. According to him a word becomes general by being used as a sign for all particular ideas which by virtue of their resemblance belong to the same species and any one of which the word indifferently suggests to the mind.⁹ It is, as one sees, rather the same process as in the case

of the formation of general ideas. "And as that particular line becomes general, by being made a sign, so the name line which taken absolutely is particular, by being a sign is made general. And as the former owes its generality, not to its being the sign of an abstract or general line, but of all particular right lines that may possibly exist, so the latter must be thought to derive its generality from the same cause, namely, the various particular lines which it indifferently denotes.¹⁰

[189] The general concept, then, and the general word, are both opposed to the same particular ideas as signs of them. But how are general words and general concepts related to one another? They are not identical, since the general idea, unlike the general word, is, as has been said, similar in nature to the particular ideas which it represents. Nor is the general word a sign for the general idea since, as has just been shown, it designates indifferently all particular ideas of the same kind.¹¹ Furthermore, neither Berkeley nor anyone else either before or after him has claimed that the idea is a sign for the word. Is there then no connection at all between general words and general ideas? That would seem to contradict experience. Yet Berkeley himself has not shown a way of solving this difficulty. Nor indeed is it conceivable how at this point an attempted solution could lead to success.

Words thus become general by becoming signs for particular ideas; from this though one must not infer that every time we hear a general name, such an idea must necessarily be elicited in us, since,

rather, "in reading and discoursing, names [are] being for the most part used as letters are in algebra, in which though a particular quantity be [190] marked by each letter, yet to proceed right it is not requisite that in every step each letter suggest to your thoughts, that particular quantity it was appointed to stand for."¹² Moreover, there are general words which are not grounded in any particular idea; an active mind, for example, "can be neither an idea nor similar to an idea" for an idea is absolutely inert. "Whence it should seem to follow that those words which denote an active principle, soul, or spirit do not, in a strict and proper sense, stand for ideas. And yet they are not insignificant neither; since I understand what is signified by the term I, or myself or know what it means, although it be no idea, nor like an idea, but that which thinks, and wills, and apprehends ideas, and operates about them."¹³ Similarly, we cannot ground the words number and power in any definite idea, yet with respect to both we make assertions most evident and useful.¹⁴

These statements could easily lead one to the belief that Berkeley meant here to correct Locke's claim that words are signs for ideas by making them, rather, signs for objects conceived. That this is not, or at least not in this generality, the view of the Irishman is perfectly clear, if only because at least with respect to the external world, Locke's thesis in its general formulation suited no one better than Berkeley, for whom all so-called external objects are nothing but ideas. For the rest, everyone must have been struck, even

complexes of ideas from which alone one could abstract. This objection, though, cannot be made in the cases to which Berkeley alludes. That is evident at first glance; for even if ideas have been perceived in separation from each other, they could yet through association be tied so closely to each other that a special psychic act is required to separate them.

It will thus be better to restrict the word abstraction. Berkeley's distinction, however, is not therefore without value. Independently perceivable parts of ideas (above all here to be considered are those which, as in the above example, belong to the domains of different senses) do in fact cling far less strongly to one another than those which can always only be perceived together. That is why as a rule abstraction succeeds in the one case far better than in the other. I can quite well conceive a piece of rock salt and in doing so completely ignore its taste while it would be impossible for me to think such a mineral without any color.

Berkeley's example of the head and body of a man is an entirely different matter and here completely irrelevant. For, if by this example he means to limit the capacity of separating physical parts from each other by the condition of independent existence or, even, of independent perceptibility, then he inevitably grants indefensible consequences which become apparent as soon as one attempts to apply this principle to the most important of our senses, sight. If we perceive an object by direct vision, which may be done at a glance in case it is small or

distant, or by means of eye movements in case it is large or near, then we must at the same time perceive its surroundings. The latter may [195] change, but some one or other will always be perceived. Hence, if Berkeley's condition were sound, it would seem that we could not possibly abstract the idea of an object directly seen from some surrounding (which according to Berkeley is as much as to say from a concrete surrounding). This, however, is not quite true of an indirectly seen object. The binocular field of vision is bounded above and below by eyebrows, nose and cheeks. The monocular field also has a visible inner boundary. Thus, every object, no matter how distant from the fixation position in the indicated directions still would, if at all visible, have the designated parts of the face as a surrounding. Outwards, though, each visual field is open, not infinitely, of course, yet such that a boundary is not being perceived. One could appeal to this circumstance in Berkeley's defense, since it is at least possible so to adjust the axis of the eye that the object in question would come to lie at the very edge of the visual field, thus being at least in part perceived without surroundings. But one who makes this claim overlooks, first, that by chance such a position would occur accidentally but very rarely; and, second, that no one can remember to have brought it about intentionally, unless of course he was interested in the experiment. He overlooks, furthermore, that at this extreme end of the visual field the images are so weak and indistinct that they are scarcely capable of more than facilitating the reproduction of images obtained

earlier through perception by direct vision; and that, therefore, a contrast between indirectly and directly obtained images would certainly not influence the reproduction in favor of the former. Moreover, everyone's experience appears to show unambiguously that when remembering a seen object we tend (even with the aid of eye movements) to represent it as seen as directly as possible. In short, everything indicates that indirect vision is of no use in our case. It follows that, if Berkeley were right, we would be completely incapable of abstracting the idea of an object from that of a completely determinate surrounding. This, however, contradicts all experience; surely even Berkeley would have hesitated to maintain explicitly what, as we see, must implicitly stand and fall with what he asserts.

We would not have dwelt so long on this apparently so minor point, if Berkeley's example were not one of those most likely to suggest the correct solution to the main question. One may doubt whether he can ignore metaphysical or logical parts. But then he can have no such doubt concerning physical parts. No one doubts that he notices in very different ways the several impressions which are presented simultaneously to the eye or ear. But if one asks someone who has never engaged in philosophical speculation how he could miss this or that which he undoubtedly had before his eyes, he will simply say that he attended to something completely different. Nor of course does he suspect that his answer contains the point of view from which a much discussed philosophical controversy can be decided rather easily.

Moreover, it is easy to show that Berkeley himself had in his hand the key to the removal of all difficulties, indeed, that on occasion he used it spontaneously, as it were, which makes it the more remarkable that he nevertheless appears not to have any inkling of its true significance. "To discern the agreements or disagreements," he says at one place, "there are between my ideas, to see what ideas are included in any compound idea and what not, there is nothing more requisite than an attentive perception of what passes in my own understanding."²⁰ Taken in isolation, this passage cannot but seem very strange; it is hard to see how one can discern the elements of a complex of ideas if one cannot conceive these elements, which, of course, are abstracta. But the passage becomes completely intelligible if one consults another passage [197] which contains the second and most important of the above-mentioned admissions of the Irish philosopher. It reads: "And here it must be acknowledged that a man may consider a figure merely as triangular, without attending to the particular qualities of the angles, or relations of the sides. So far he may abstract: but this will never prove that he can frame an abstract general inconsistent idea of a triangle. In like manner we may consider Peter so far forth as man, or so far forth as animal, without framing the forementioned abstract idea, either of man or of animal; in as much as all that is perceived is not considered."²¹ This the most ardent proponent of conceptualism could accept.²²

In order to appreciate the significance of these words and,

at the same time, to recognize how the Irishman could occasionally come closer to the truth, even at the expense of his consistency, than many of his successors, one must consider the context in which he felt compelled to make that statement. On the basis of the above-reproduced discussion of the generality of ideas and words, one can perhaps imagine how we come to entertain general propositions. But how could we ever prove them? The representation Berkeley emphasized is evidently of no use here; for, though the idea a represents the similar ones b, c, d, etc., the latter are only similar and not equal to a. Hence, not everything which can be proved about a need hold for the rest. But to what extent a does in fact represent the ideas is left completely undetermined by the simple circumstance that it represents them. Berkeley does not fail to sense that there is a difficulty; he himself raises the question of proof, and continues: "To which I answer that, though the idea I have in view whilst I make the demonstration be, for instance, that of an isosceles rectangular triangle whose sides are of a determinate length, I may nevertheless be certain it extends to all other rectilinear triangles, of what sort or bigness soever. And that because neither [198] the right angle, nor the equality, nor the determinate length of the sides are at all concerned in the demonstration." However, in these words lies only what is already contained in the first passage cited, namely: that while considering an individual it lies in our power to concentrate attention on some characteristic to such an extent that we can ignore the other attributes. But if that be the case, then

to Locke, but also the existence of abstract ideas can be recognized. Everyone who pays attention to his own mental activity easily recognizes how attention proves to be active in the formation of abstract concepts out of concrete ones. A statement by John Stuart Mill, reproduced below (see 173f.) will further clarify the process. It is equally obvious that what the logicians call the content of a concept coincides in the case of abstract concepts only with that part of the respective concrete complex idea which is picked out by attention, while in the extension of this concept all individuals must be counted which have all the attributes that make up the content. But as soon as we want to start analyzing the relation of abstract and concrete to universal and particular, we immediately encounter an obstacle, which has proved fatal to many a philosophical inquiry, namely, uncertainty and confusion in terminology.

Of course, many have used and do use the terms under discussion quite indiscriminately for each other. J. St. Mill, therefore, thought himself entitled to use the words abstract and concrete, which as a consequence had become meaningless, as it were, in a way which followed the scholastic usage as the labels for a distinction within the class of general names.²³ In Germany, too, some (e.g., Ueberweg, Siegwart) have accepted this way of speaking. Nevertheless this use still sufficiently contradicts ordinary use for a consideration, whether anything at all can be said in favor of the latter, not to come too late. At least one thing appears beyond doubt: one who claims that

the predicates, general and abstract, or particular and concrete, can always be asserted of the same concepts, means as a rule to have thereby recognized a very important psychological fact and does not in any way mean merely to have uttered an empty tautology. It follows that in ordinary language these words in no way pass for synonyms. On the contrary, everyone recognizes after but a little reflection that the words general and particular relate to the extension; the words abstract and concrete, to the content. A concept to which correspond, or at least can correspond, several objects is general. Particular or individual, on the other hand is a concept which does not permit without contradiction, or at least without infinitely large improbability, reference to more than one object.²⁴ On the other hand it is most natural to call abstract each concept which is the result of an abstraction, while each concept to which nothing of the kind has as yet happened, will have to be called concrete.²⁵

A definition like the last two could easily be named an idem for idem, for both really say no more than: "what is called abstract is what is abstracted." Even so, this is the most natural, and considering the divergencies in linguistic usage, this alone is surely an advantage. Moreover, it cannot be doubted that this definition also provided the standard for J. St. Mill. Indeed, he (loc. cit.) declares himself opposed to: "applying the expression 'abstract name' to all names which are the result of abstraction . . .", but what could have caused him to call the names of the attributes 'abstract' if not pre-

cisely the circumstance that they are considered "results of abstractions"?

[201] But if this can be asserted of whiteness, humanity and old age , then certainly also of white, man and old. To exclude the latter names (or concepts) from the class to which the former belong, although the specific difference of the class is equally characteristic of all, can only be considered as a logical mistake. By this it is naturally by no means denied that there is a difference between the names of attributes and those of objects, and in order to do justice to this difference also in the way one speaks, without having to invent new names, it is perhaps best to contrast the former group as "abstracta in the narrow sense" with abstracta in the broader sense of the term.

If the terminology is settled in this way, then no one can call the expressions under discussion superfluous. For to each of the latter corresponds a completed determinant, a specific concept, and if two of these concepts should apply to the same object they would not on that account be less different than perhaps the concepts "freezing at 0 degrees centigrade" and "consisting of oxygen and hydrogen", both of which, as is well known, can be asserted of the same thing—water.

But does such a coincidence really exist? That a concept could be at the same time general and individual, as Drobisch believed,²⁶ or at the same time abstract and concrete as James Mill²⁷ and Alexander Bain²⁸ asserted, is automatically excluded by the above definitions. The often heard claim of the inverse quantitative ratio of the extension and the content of a concept,²⁹ on the other hand,

may find all the more ready acceptance. The law in question can perhaps be expressed thus: the greater the extension of a concept, the smaller the content; the greater the content, the smaller the extension. Expressed differently: the more general, the more abstract; the less general, the less abstract. If the content is = 1 (a simple concept) then [202] the extension is infinitely large. If the content is infinitely large (this is usually given as a characteristic of concrete ideas) then the extension is = 1; that is, each concrete idea is individual; each individual one, concrete, from which it follows that all abstracta are general and all universal concepts are abstract. Extension and content, therefore, mutually determine each other.

That all concrete ideas are in fact also individual must be clear to everyone who considers that each concrete idea of a psychological or physical object contains a completely determinate time datum, or a space and a time datum, respectively, and that in neither of the two cases can a plurality of objects be admitted, although the reason which forbids this hypothesis is not completely similar in the two cases. In the first case, the contrary claim involves a contradiction for the word identity signifies, if anything, the relation of one psychological phenomenon to another psychological phenomenon which agrees with it in all determinations, including time. Not so in the second case. The still pending dispute among psychologists whether one can see³⁰ different colors at one and the same place at the same time shows at least that such an hypothesis is not absurd. The law of the impenetrability of

bodies is not analytic. And if it is not contradictory that different objects could at the same time occupy the same place, then it is hard to see why these objects should lose their different individualities if they otherwise by chance agreed in every respect. This distinction is naturally not of practical significance; for if the law of impenetrability does not have mathematical certainty, it yet has in any case physical certainty. But this could not thereby exempt us from specifying this difference in the above definition of individuals.

[203] The data of time, respectively of space and time, thus points unambiguously to a single individual. If on the other hand one wants to ignore space and time, he can do this only through abstraction and with this the idea in question ceases to be concrete. But this is not to be so understood that the concrete idea must contain all the characteristics of the object conceived. There may be infinitely many of these characteristics; many might become accessible to the senses only later, many not at all. The number of elements of the concrete concept thus remains limited; not even all the attributes known to the person must be included in the idea. Indeed, they often cannot at all be included, especially if these attributes presuppose relations to other objects. The concretum includes nothing but the complex of characteristics which by virtue of the nature of the object all at once intrudes upon the senses; hence, above all, those which are brought to consciousness by the dominant sense, as a rule, sight. The data of other senses are included only if they impose themselves in such

striking ways that they immediately enter into a strong association with those from the sense of sight, which association cannot be severed at all or only with great difficulty, in the case of later reproductions. In this way, for example, the visual image of a waterfall may, for the nearby spectator, combine with the simultaneously perceived auditory sensation of the roar, into the whole of a simple concrete idea. Perhaps different subjects react differently to the same object. But let me stress, in order to avoid misunderstanding, that as soon as the observer in our example calls the object of the idea as "this waterfall", he thereby discloses not only the existence of a concrete idea but also that of an abstract idea. For these words indicate already the subsumption of the observed phenomenon under a class, which subsumption cannot occur without a general (and therefore abstract) idea.

A. Bain mentioned a case of a completely unique kind, which [204] deserves mention also in this connection. "Thus, in sight," he claims,³¹ "we can be more engaged with the muscular than with the optical elements, and vice versa; but we cannot entirely separate the two." Here, therefore, data of completely different senses (visual sensations and muscular feelings) would always and everywhere be fused into a concrete idea. But it is questionable whether Bain is right in this claim of inseparability, and it must at least remain doubtful in view of the circumstance that nothing more easily eludes the attention than muscular feelings.

All concrete concepts thus are particular; but are all par-

particular concepts also concrete? Hamilton has already attempted to establish the existence of particular abstract ideas. "The notion of the figure of the desk before me," he says,³² "is an abstract idea . . . but it is at the same time individual; it represents the figure of this particular desk, and not the figure of any other body." Unimpeachable as this may be, provided one grounds, with Hamilton, the sensible qualities in a substance, whose idea is innate, it cannot but be dubious to use, without discussing it, a metaphysical theory so frequently attacked as the basis for a psychological investigation. Putting one's self for a moment in the place of Hamilton's opponents, considering external objects, to speak with J. St. Mill,³³ merely as "groups of sensations," one recognizes immediately how unfortunate it was to single out just the figure as an example. Its figure determines the extension of the desk, but also its color appears in a completely determined figure and this latter figure unquestionably coincides completely with the former. But does it follow that we deal with only one figure? This is the more doubtful as the extension and with it the figure of the desk can also be perceived through the sense of touch while the color and the figure that goes with it belong to the province of the sense of [205] sight. Therefore, supposing all of this to be correct, what is one talking about when talking about the figure of the desk? Evidently about a plurality and thereby the abstract concept has ceased to be individual.

Even though we have here appealed to the authority of J. St.

Mill, he himself would hardly sustain our objection against his opponent Hamilton. If, for example, the seen and the touched figure really coincided completely, then he would have no misgivings in taking them to be not only equal but identical. For he goes even further in this direction; since, considering himself entitled to suppose exactly equal attributes to be identical, he creates a whole class of abstract individuals, abstract in his sense and therefore also in ours. "But when only one attribute," he claims,³⁴ "neither variable in degree nor in kind, is designated by the name; as visibleness; tangibleness; equality; squareness; milk-whiteness; then the name can hardly be considered general; for though it denotes an attribute of many different objects, the attribute itself is always conceived as one not many." Without question Mill here has, to a quite extraordinary extent, linguistic usage on his side. One says everyday and hears it said that this and that thing have the same size, the same color, etc., but almost as often the expression, equal color, equal size, etc., occur in the same cases, so that it must seem most highly problematic to appeal only to the first way of speaking since the second proves amply that common usage does not at all know how to distinguish the words identity and equality. The only thing to do, therefore, is to make the meaning of both names as clear as we possibly can. In fact, if one wanted to call nothing identical which "express themselves to our senses not by the same individual sensations" then, Mill correctly maintained against Herbert Spencer,³⁵ "the humanity even of one man should be considered as different attributes now and half-an-

hour hence." Not even absolute equality of the sensations is required; [206] we usually consider an object as still identical if we perceive it at different times and at different places, and equality is so far from always going together with identity, that when we make the two perceptions in question still more similar by making the time equal while leaving the place determinations different, identity is thereby being excluded. Nevertheless, confusion scarcely seems possible with respect to identity of objects. But how about of attributes? Suppose we have two congruent triangles, A and B. Is the triangularity of A identical with the triangularity of B? That is, is the triangularity of A the triangularity of B? No one will deny that A can persist even if B is annihilated, just as it will not be challenged that the attribute cleaves to its object, persists with it, but also vanishes with it. Hence, if B no longer exists, then the triangularity of B does not exist either, while A and the triangularity of A continue to exist undisturbed. But now, according to Mill, the triangularity of A is the triangularity of B. Hence, this self-same triangularity both does and does not exist, which no one will be inclined to consider possible. What these apparently rather pointless remarks want to prove is one thing only, namely, this, that if one speaks of the identity of equal attributes of different things, identity in the strong sense could not possibly be meant, and second, that it is equally inaccurate to call, as Mill does, the general idea "the One in the Many." If one wants to consider an attribute as an individual then one must recognize as many

attributed individuals as there are real ones; Mill's "abstract idea" therefore must remain universal exactly to the same extent as the accompanying "concrete idea" is general. This was also the reason why already above (p. 115) we put these 'abstracta' with the 'general names'.

Hamilton in any case came close to the truth in this matter since basically he erred merely in the choice of example. If instead [207] of the figure of the desk he had dealt with its color, his claim would have been incontestable from every point of view. But are examples of individual abstract ideas only met with among the ideas of attributes? If I think of a friend, I must have a particular idea of him; but I do not know where he is right now; that idea thus lacks a space datum, hence it can no longer be concrete. I come to a place where I know my friend has been, only I do not know when; if, therefore, I think of him as at this place, then I must leave the time undetermined. But even without such specific occasions, I think of the friend as in his nature persisting through the changes of space and time, that is, I usually abstract from space and time in the case of the idea of this man. The same also holds for inanimate objects inasmuch as space and time do not constitute an essential determination of them. Let us take another example: There are green apples in a sack. Someone takes out an apple, then goes to the owner and asks him for this apple. The owner, who is absorbed in some work, answers, without looking up: "You will not be able to eat it, it is still green." The speaker here certainly thinks of only one apple (just as

the other has taken only one), he abstracts from space (he does not at all know where the apple is), just as from a particular moment (the apple will still be just as unripe in an hour as it was an hour ago). Furthermore, he also has no determinate idea of the color, shape and size of the apple, for even if he knew each one of his apples from the other, he still cannot have any definite one in mind since he does not know which has been taken out. In a similar manner I speak of the joiner who has produced my desk; I think of only one individual, but I have never seen him, and therefore cannot possibly have a concrete idea of him. If, finally, one considers ideas such as: the wisest of all men, the most radiant of all stars, one will not even find the trace of anything concrete; yet they are nevertheless individual. For, [208] if two men, for example, were wiser than all others, one could call them the two wisest of all, but one could not strictly speaking call either the one wisest of all.

Abstract individual concepts are not by any means as rare, then, as one might suspect from Hamilton's way of presenting the matter. But perhaps we shall now succeed in subsuming the many empirically gathered instances under a few unifying points of view. What matters above all is, obviously, to ascertain what is required to give an idea the character of an individual concept. This, it seems, can be done in three kinds of ways: either (1) the concept is concrete, or (2) its object is thought of in relation either to a concrete idea or to its object; and in particular, in a relation that excludes a plurality of

terms on the part of the object, or, finally, (3) the relation applies to all of the individuals of the class to which the object in question belongs with the single exception of just this object itself.

The first way comprehends all concrete individuals and was already discussed above under the title of concrete ideas with which it coincided. This is the form in which each empirical datum first enters our consciousness, and to that extent the concrete ideas are the foundations of all knowledge. But knowledge is not chiefly of our ideas but of their objects and it attempts to isolate what is characteristic of the latter from the accidental added in the acts presenting them. Whereby almost always what makes the idea concrete will be suppressed, from which alone it follows that almost all concepts of individuals cannot but be abstracta.

These abstract individual concepts are now to be subsumed under the second and third of the above cases. A relation is characteristic for the one as well as for the other. But while in the second group at least the correlate is still concrete, this is no longer so in the third group so that in this case the individual concept consists only of abstract concepts.

[209] Of these two classes the first, being by far the most numerous, is of chief importance. Pertinent examples are those given above, of the friend, of the apple, and of the joiner. For a complete clarification a few remarks may not be out of place here. Since the correlate here is always individual, confusion is prevented, this being guaranteed

by its own nature as a concretum. The same cannot be said of every relation. If I say, "This man," (whom I just see or have seen yesterday), the person is completely determined. There is a concrete sense perception and an object which is thought of as its cause. This sense perception could evidently only be caused by one object, whereby naturally it is by no means prejudged whether or not the object happens to be a collection. The concretum can also stand in a more indirect relation to the object of the individual idea, as when I say: "The father of this man." Here, too, the individuality of the concept is beyond doubt. If on the other hand I had said: Son of this man, neighbor of this man, these would be general concepts whose individualization requires further determination. Nor, incidentally and rather obviously, does it make any difference for the character of the concepts conceived whether what is being conceived is a thing or a mere attribute. An example of the latter kind, aside from the considerations urged above, is the particular abstractum Hamilton mentions. Whether I conceived this desk or the attribute x of this desk, in either case the idea can have only one object.

The second kind of abstract individual concept has been sufficiently illustrated by the example of the wisest man and the most beautiful star. While in the previous class in most cases only an enormously large improbability excluded the existence of several objects, here this is excluded by the principle of contradiction. In language a special form of expression, the singular superlative of the

adjectives, seems to correspond to these ideas.

If, accordingly, it follows from our investigations that not only all but, rather, only very few individual concepts can be called concrete, then it follows directly that while all general concepts are [210] abstract, not all abstract ones are general. What, then, has become of the apparently so plausible principle that extension and content of concepts vary inversely?

If the extension of a simple concept is granted to be infinitely large, it yet is not clear why a complex concept, too, could not comprehend infinitely many objects under it, although perhaps fewer than are under the simple concept. But with respect to the content of an individual concept, though, infinity can in no way be admitted. A concept with infinitely many determinations goes far beyond the limits of what we can grasp; for the rest, we encountered only a limited number of determinations in the concrete individual ideas. That the same holds of abstract individual ideas, only to an even higher degree, needs no emphasis. We do think of the individual as endowed with infinitely many attributes (although unknown by us); yet the idea of something infinite surely does not itself have infinitely many conceived constituents. Moreover, if one considers these attributes, there is no reason why several individuals could not agree in an infinite number of attributes (the coincidence of space and time determinations being obviously excluded). If an individual really has infinitely many determinations and if one omits from them the (finitely)

many which presuppose its individuality, then the remainder is still infinitely large and can without contradiction be considered as general.

Furthermore, we have found that individual concepts, though all having the same extension, can yet be greatly different in content. Equally patently, there are cases where an increase or a decrease with respect to the content of a concept leaves the extension completely unchanged, namely, if one adds to a genus or species concept a proprium [211] of the genus or species or if, on the contrary, by omitting the proprium, one reduces the concept so enriched to the pure genus or species concept, respectively. In brief, there can be no doubt that, at least in its generality, the principle in question is completely untenable. Accordingly, Drobisch has attempted to establish³⁶ the principle in at least a limited domain and, in a few simple cases, even to put the relation of extension and content into a mathematical formula.³⁷ But there is, in addition to the practical objections already made by Ueberweg³⁸ to this formula, also a theoretical one. Drobisch has made it much easier for himself to solve his problem, or rather, he makes a solution possible only by his definition of extension. The latter, according to him, is "Ordered totality of all species coordinated" of the concept of the object,³⁹ whereby naturally are meant the lowest species. But by this definition the meaning of the word extension has been completely shifted; ordinarily one means by it the totality of individuals falling under the concept in question, while according to Drobisch in the case of the lowest species there can no

longer be any talk of extension or, at most, it is a unit. With the ordinary meaning, however, which surely is the only proper one, these formulae are inapplicable. For, since he equates all the lowest species to 1 (=1) the extensions of the latter are treated as if they were all equal, which hardly conforms to reality in any case.

Aside from the mathematical part, however, one must agree with Drobisch's modifications. According to him, the law receives this form: "Comparing any two series of subordinate concepts, the one which has the larger content than the other has the smaller extension, and, conversely, the one which has the greater extension than the other has the smaller [212] content." But it must be kept in mind that this is so only in the case of a single series of subordinated concepts and that the amount of increase or decrease is left completely undetermined. Beyond these limits the law is not even approximately accurate.

Here is, briefly, what our considerations have shown: For the question of whether a concept is universal or particular, the number of attributes constituting its content is entirely irrelevant; not so, however, the quality of these attributes. For, depending on whether, with regard to these qualities, the existence of several individuals corresponding to the concept in question is or is not either mathematically or physically impossible, the concept must be considered as particular or general. For the question of whether a universal concept be more or less universal on the other hand, the amount of content can in certain cases be relevant; the quality of content is always relevant; yet from

either the latter or the former or from both alone, exactly nothing would follow (about extension). For extension is a matter of a relation of which the content is only one term. Thus, if it is given, the second term can be furnished only by experience.

It is worth noticing that the extension, unlike the content, is not anything which is either as a matter of concern or necessarily conceived in the concept. It is true that when thinking an idea, one will frequently also be aware of whether its extension is large or small. But this is altogether inessential, and if subsequent experience shows that the extension is far greater than formerly believed, this does not make any change whatsoever in the concept. That is why the extension of a universal concept is usually thought of as something which for our knowledge is undetermined, since many things may belong to it which we have never conceived. The actual extension is just as independent of our knowledge as is anything else in the external world. This excludes that, in order for an individual idea to be subsumed under [213] a general one, an association between them must be established, though no one will deny that such an association is nothing rare, if only because of the resemblance between the universal concept and the subordinate particular ideas. Where the resemblance occurs, it will naturally also be manifest through the reproduction of the one member if the other has been presented. But it is clear that one who believed to have discovered the essence of extension in this reproduction would be grievously mistaken.

After this longish, yet I hope not worthless, digression, let us return to the examination of Berkeley. As we saw, he did not really use attention as the principle of explanation for the phenomenon of generalization. Driven by his opposition to Locke to denying all abstraction, he deprived himself of the possibility of satisfactorily solving the problem. Many correct observations of detail are naturally compatible with this. He was, as we now understand, entirely correct in claiming that universality does not exist in the 'absolute positive being' of something by itself. Also, what he says about general concepts substituting for individual ones can be made sense of. But whatever he says in this context is fragmentary and vague. Reading that ideas owe their generality to what they signify, one simply does not know whether this is the start of a theory of association. But one must reject without qualification the view that concepts, "which are in their own nature particular" could become general in any other way than by giving up this nature.

We cannot so quickly pass over Berkeley's statements about the meaning of words. We know already that his polemic against Locke cannot be construed as supporting the view that words relate to things. This, however, does not prevent Berkeley's assertions from being much closer to the true state of affairs than Locke's. The latter holds the use of [214] words for things to be wrong-headed.⁴⁰ J. St. Mill⁴¹ was right in pointing out how far we are from wanting to assert anything about our ideas by the sentence, "The sun is the cause of day." Berkeley, as it were, stands in the middle in this conflict in that for him the dif-

ference between idea and object does not exist. But the progress beyond Locke becomes evident in the assertion that the general word does not signify a general idea but, rather, individual ones. In fact, when one says, "Each body is heavy," one never means that the general concept body is heavy, or anything like that. Quite to the contrary, one speaks of all single individuals which, according to Berkeley, are but individual ideas.

Hence, if one takes this thesis of Berkeley to be only about the meaning of the general word, then it is unimpeachable, at least as long as one neglects the metaphysical aspect. In the unqualified form in which we encountered it, this thesis is nevertheless dubious, as was noticed above (p. 103). For, in a certain sense the general word is still a sign of a general idea. Already Hobbes has defined the name as "a word. . . which, being pronounced to others, may be to them a sign of what thought . . . [is] in his mind." And J. St. Mill cannot but recognize that this statement, which he cites, is correct. Therefore, if one utters a general name, the hearer will as a rule be justified in inferring that there was before the speaker's mind an idea of several individual objects, that is, a general idea which was the cause of his uttering the word. Consequently, it would be just as one-sided to claim that words only signify objects as to claim that they only signify ideas. Rather they do both, although, as must be noticed, each in a different sense. Moreover, they do neither without exception. If one does not [215] understand a word, he can yet repeat it. In which case it sig-

nifies nothing at all. Less obvious is a series of other exceptions, and Berkeley has a point in calling attention to them; these are cases where the words are not at all unintelligible to us.

It is a fact that we often use words and use them correctly without clearly grasping their meanings at the moment we use them. Leibniz and Locke had already noticed that before Berkeley. Also after him this fact was the subject of repeated discussion on both sides of the Channel, and today schools otherwise as opposed to each other as the empiricists and the intuitionists in England are in complete agreement on this point.⁴² But Berkeley went further than all of them by claiming that we use words in accurate and fruitful judgments even where we never had nor could have any ideas connected with them.⁴³ This, though, would make an epistemological principle out of the words of the poet: "Wo Begriffe fehlen, da stellt ein Wort zur rechten Zeit sich ein", which, alas, one is only too often justified in applying to philosophical speculations. Thus we shall not need either to refute this view of Berkeley or to examine the examples he gives.

One question, however, must still be answered before we turn from Berkeley's doctrine to that of his successor, namely, whether Berkeley should be put among the nominalistic or among the conceptualist thinkers. It is partly because of this question that we included the

[216] Irishman's assertions about general names. The material then is at hand; the decision will therefore not take long.

One has become so accustomed to regard Berkeley as the most prominent founder of modern nominalism, that one does not find it at all remarkable when Hamilton, for example, simply calls him "the second great nominalist,"⁴⁴ or when Kuno Fischer asserts: "Among the newer philosophers, the nominalistic way of thinking is familiar, but no one went further than Berkeley in putting it into the foreground of all philosophical reflection, and making it a fundamental principle."⁴⁵ All nominalistic theories of this as well as of the previous century do in fact start from Berkeley. That alone, though, is not sufficient proof that he himself was a nominalist. And one merely need to take a look at his doctrine to see the troubles into which such a proof runs. If one follows Hamilton in calling nominalistic every view which claims "that every notion, considered in itself, is singular, but becomes, as it were, general, through the intention of the mind to make it represent every other resembling notion,"⁴⁶ then one must also place the Irish philosopher among the nominalists; in which case everything is clear and justifiable except the name nominalist itself, since words have no essential part in such a theory. That makes it advisable to follow J. St. Mill in calling nominalist those who "held that there is nothing general except names."⁴⁷ Then it will be evident to everyone that Berkeley does not belong to this group, since, though he acknowledges general names, he also, as we saw, acknowledges general ideas. It is

true, though, that insofar as there is for him knowledge through words which are not based in any idea, he is a nominalist to an extreme which, fortunately, none of his followers dared to imitate. For the rest, how- [217] ever, names, it turns out, are for him not at all essential in the forming of a general concept. Consequently, we are forced to assign him an intermediate position between the representatives of nominalism and conceptualism.

In order correctly to understand and to appreciate Berkeley's doctrine of abstraction one must keep in mind that it represents above all a stage of transition and development, which was perhaps destined to lead to substantial successors, yet could not in itself overcome the character of the unfinished. In Locke we find the old nominalism, conscious of its opposition to realism, yet still compatible and united with conceptualism. Berkeley mediates the transition from the old nominalism to the new, for which the opposition to conceptualism is essential. Yet he himself still stands with one foot on the ground which he attempts to undermine by his attack on abstract ideas. More than that, he proposes a line of thought which, properly developed, could perhaps serve as an unshakable foundation of conceptualism. That is why one can repeat the claim just made, that Berkeley stands in the middle between opposing views, in the further sense that, after a fashion, he includes tendencies to both theories.

But one cannot judge the fruit from the seed. Thus it was necessary that his doctrine first had to be properly developed. There was no

other way of finding out whether he had shown the right way. This further development occurred in the person of the Scot, David Hume, to whose proposals we now turn.

[218] David Hume, in his first and most comprehensive work, the Treatise Concerning Human Nature, which alone we shall now consider, explicitly accepts Berkeley's investigations about the abstraction issue. He calls their result "one of the greatest and most valuable discoveries that has been made of later years in the republic of letters," and sets himself merely the task of placing this discovery completely beyond doubt through some new arguments.⁴⁸ Through this statement, whose acceptibleness leaves nothing to be desired, the relation of both thinkers to one another seems most clearly established. Nor has anyone ever hesitated to characterize Hume's theory of abstraction as simply a repetition and at most a new underpinning of Berkeley's. Even the most recent and perhaps the most thorough commentator on Hume's philosophy, E. Pflleiderer,⁴⁹ is no exception.

But in spite of this it is not advisable to disregard completely the way in which he restates the opinions of Berkeley merely because of what he himself says about his relation to the latter. Berkeley, he says, "has asserted, that all general ideas are nothing but particular ones, annexed to a certain term, which gives them a more exten-

sive signification and makes them recall upon occasion other individuals, which are similar to them."⁵⁰ Is this really Berkeley's view?⁵¹ If we have above correctly represented the latter, then the difference is obvious. It is correct that for Berkeley as for Hume the general ideas are particular ideas with general signification.⁵² But it is false that [219] according to Berkeley they owe their generality to the expressions which are annexed with them. That nothing in Berkeley's exposition indicates a connection between words and general ideas has already been shown above.⁵³ And that Hume's interpretation is in direct conflict with the Irishman's intention follows easily from the following consideration: Toward the end of the often cited introduction to the Treatise on the Principles of Human Knowledge we read: "Since therefore words are so apt to impose on the understanding, whatever ideas I consider, I shall endeavor to take them bare and naked into my view, keeping out of my thoughts, so far as I am able, those names which long and constant use hath so strictly united with them."⁵⁴ Such "thinking without names" which surely, like all scientific thinking, presupposes general concepts would, according to Hume, be simply impossible, since according to his opinion, particular ideas become general only through the words connected with them. Hence, if the words are separated from the ideas, then the latter have lost their generality and one could not understand how Berkeley could expect in his scientific investigations to benefit from this approach. It follows conclusively that Hume has introduced an entirely alien feature into Berkeley's doctrine.

Naturally it is an entirely different question whether this new feature is not also an essential progress on the way Berkeley took, if only one ignores his effort to emancipate the concepts from the words. One thing can be seen from the very formulation of Hume's thesis, even before one enters into his arguments: The most essential gaps in Berkeley's position have been filled. In some way at least, the relation between [220] general words and general ideas has been specified. Above all, the question of how a particular idea comes to "represent" or to "designate" other similar ideas and so to become general, has found an answer. Whether the hypothesis be tenable or not, it has in any case become clear and capable of being discussed due to the way that names occupy the foreground. Psychology can only gain from a discussion of this hypothesis. For this reason Hume conducted the investigation of abstracta more and more independently than one is usually willing to admit. He, not Berkeley, has given to words a position so prominent in our mental life that it justifies our calling his and his successors' theories nominalistic. Thus he, far more than Berkeley, deserves the title of the real founder of modern nominalism.

Let us now look more closely into Hume's inquiries. What they start from is the fact that most or all general ideas abstract from the special degree of quality and quantity, on the ground that such ab-

Naturally it is an entirely different question whether this new feature is not also an essential progress on the way Berkeley took, if only one ignores his effort to emancipate the concepts from the words. One thing can be seen from the very formulation of Hume's thesis, even before one enters into his arguments: The most essential gaps in Berkeley's position have been filled. In some way at least, the relation between [220] general words and general ideas has been specified. Above all, the question of how a particular idea comes to "represent" or to "designate" other similar ideas and so to become general, has found an answer. Whether the hypothesis be tenable or not, it has in any case become clear and capable of being discussed due to the way that names occupy the foreground. Psychology can only gain from a discussion of this hypothesis. For this reason Hume conducted the investigation of abstracta more and more independently than one is usually willing to admit. He, not Berkeley, has given to words a position so prominent in our mental life that it justifies our calling his and his successors' theories nominalistic. Thus he, far more than Berkeley, deserves the title of the real founder of modern nominalism.

Let us now look more closely into Hume's inquiries. What they start from is the fact that most or all general ideas abstract from the special degree of quality and quantity, on the ground that such ab-

straction could hardly ground a difference in kind. Yet, "the abstract idea of a man represents men of all sizes and all qualities; which 'tis concluded it cannot do, but either by representing at once all possible sizes and all possible qualities, or by representing no particular one at all." The former appears to presuppose an infinite mental capacity; thus one chose the latter. Hume, for his part, wants to show, first, that it is impossible to conceive either quantity or quality without a determinate degree; and, second, that in spite of our merely finite mental capacity, we can form "a notion of all possible degrees of quantity and quality," not completely, to be sure, yet in a way sufficient for all practical purposes.⁵⁵

The first, negative part of his claim Hume supports with the following three arguments:

[221] 1. Whatever is different is distinguishable; and whatever is distinguishable is also separable in thought, and conversely; whatever is separable is also distinguishable and therefore different. In order to decide whether in the case of abstraction separation can occur, all one needs to do is, therefore, to ascertain whether what is abstracted in a general idea is distinguishable and different from what remains as its supposed essence. But, e.g., the determinate length of a line is no more different than distinguishable from the line itself, and, in general, the determinate degree of a quality from the quality itself. Hence there can be no question of separation.⁵⁶

2. It is recognized that we are not conscious of any impres-

sion not determinate as to the degree of quality and quantity; the opposite contains a contradiction in terms. But ideas are but copies of impressions which differ from them only through their lesser intensity. Hence they, too, must be determinate as to degree.⁵⁷

3. Everyone admits that everything in nature is individual, and that it would be absurd to acknowledge a real triangle without determinate dimensions. What is absurd in reality must also be so in the idea, for nothing is impossible for which a clear and distinct idea can be formed. Furthermore, to form the idea of an object and to form simply an idea is one and the same, for the reference of the idea to an object is only an external denomination not grounded in the nature of the idea. If it is therefore impossible to form the idea of an object without determination as to degree, then the same is true of an idea as such.⁵⁸

All abstract ideas are, therefore, in themselves individual; but they can nonetheless be used in thought as if they were general. Therein lies the positive part of Hume's claim.

[222] The way in which particular ideas attain this general applicability is in the following: "When we have found a resemblance among several objects, that often occur to us, we apply the same name to all of them, whatever differences we may observe in the degrees of their quantity and quality, and whatever other differences may appear among them. After we have acquired a custom of this kind, the hearing of that name revives the idea of one of these objects, and makes the

imagination conceive with it all its particular circumstances and proportions. But as the same word is suppos'd to have been frequently applied to other individuals, that are different in many respects from that idea, which is immediately present to the mind; the word not being able to revive the idea of all of these individuals, only touches the soul, if I may be allow'd so to speak, and revives that custom, which we have acquir'd by surveying them. They are not really and in fact present to the mind, but only in power; nor do we draw them all out distinctly in the imagination, but keep ourselves in a readiness to survey any of them, as we may be prompted by a present design or necessity. The word raises up the individual idea along with a certain custom; and that custom produces any other individual one, for which we may have occasion. But as the production of all of the ideas, to which the name may be apply'd, is in most cases impossible, we abridge that work by a more partial consideration, and find but few inconveniences to arise in our reasoning from that abridgement."

This is to be attributed to the "most extraordinary circumstance," that this custom also immediately brings to mind any one of other individuals in case we form by chance a thought which does agree with the individual in question. If, for example, we hear the name triangle, we first think of, say, a particular equilateral triangle; [223] if, however, on this ground we would want to assert that every triangle has equal angles, an isosceles or scalene triangle would immediately occur to us. If nothing of this sort happens, this is due

to a defect of the intellectual faculties, which will easily become the cause of false judgements. This, though, occurs for the most part only with abstruse and complicated ideas. As a matter of fact, the custom is so fixed that one and the same idea can be connected with different words without there being any danger of mistake. The words, figure, rectilinear figure, regular figure, triangle, equilateral triangle, for instance, could all go with the idea of one and the same equilateral triangle before the mind.

"Before those habits have become entirely perfect, perhaps the mind may not be content with forming the idea of only one individual, but may run over several, in order to make itself comprehend its own meaning, and the compass of that collection, which it intends to express by the general term. That we may fix the meaning of the word, figure, we may revolve in our mind the ideas of circles, squares, parallelograms, triangles of different sizes and proportions, and may not rest on one image or idea. However this may be, 'tis certain that we form the idea of individuals, whenever we use any general term; that we seldom or never can exhaust these individuals; and that those, which remain, are only represented by means of that habit, by which we recall them, whenever any present occasion requires it."⁵⁹

The only point in this explanation which seems difficult to Hume is that custom, which plays such an important role in it. But since it is impossible to reduce the mental operations to their ultimate causes, a mental act is sufficiently explained if one points out

other acts which are analogous to it or support it. To this purpose Hume points out that a habitus is often connected with a single word, [224] for example, memories of sentences and of verse.⁶⁰ In our case, moreover, the re-entry into consciousness of the required idea will be greatly facilitated by the similarity of the individual concepts united under a general expression.⁶¹ Finally, the imperfection characteristic of all general ideas also has its analogies: we can form no adequate ideas of large numbers, yet this does not disturb our reasoning.⁶² Similarly, we speak of intricate things, such as government, church, without having before our minds all the simple ideas contained in these complexes. We will nevertheless not predicate anything contradictory of them because the custom of bringing the ideas into certain relations extends to the words.⁶³

With that Hume hopes to have sufficiently supported his hypothesis. His emphasis is on the negative proof. After abstract ideas have been shown to be impossible, there arises the need to explain the facts and there is in his opinion no other way than the one he has taken.⁶⁴

Under the circumstances we, too, in our critical examination of Hume's argument, shall start from its negative part.

The new formulation of the negative thesis is most striking. From the beginning of section VII it follows sufficiently beyond doubt,

that it is Hume's intention to deny all abstraction.⁶⁵ Nevertheless, he then asserts more specifically, "that 'tis utterly impossible to conceive any quantity or quality, without forming a precise notion of its [225] degrees."⁶⁶ How few cases of abstraction this covers is obvious. For if in fact it is impossible to conceive quality or quantity separable from their degrees, nothing whatsoever would be implied as to whether or not complexes of qualities which are more than just gradually different contain separable elements. To select a striking example, surely no one will want to claim that color is a degree of extension or extension a degree of color. Hence, according to Hume's thesis, nothing would prevent us from conceiving a surface without color. Yet this is what already James Mill gave as a crucial case of the "inseparable association of ideas."⁶⁷

Thus, it would seem that as long as an attribute remains determinate as to degree the possibility of forming abstract ideas of it remains unaffected. Moreover, in all those cases in which there are differences of degree, such as equal or triangular, the thesis does not apply.⁶⁸ Hence, even supposing that Hume succeeded in establishing his thesis in an irrefutable way, the conclusion drawn from it, that all general concepts are essentially concrete,⁶⁹ still does not follow. Also, at least at first glance, this conclusion seems to clash with one of the chief divisions of all psychical phenomenon, which Hume proposed. That makes it seem even stranger.

According to Hume, as everyone knows, perceptions are either impressions or ideas and, also, either simple or complex.⁷⁰ "Tho'," he

adds in explanation, "a particular colour, taste, and smell are qualities all united together in this apple, 'tis easy to perceive they are not the same, but are at least distinguishable from each other." Only under a certain assumption is that proposition of Hume's compatible with the theory under discussion, and even then only if one supposes that he expressed himself most inaccurately. If in speaking simply of 'color', Hume means everything the eye perceives in the apples, thus putting into one simple idea both a determinate color and a determinate extension, then what he says is not inconsistent. It speaks for this interpretation that Hume in the passage here quoted apparently wants to contrast the perceptions of the different senses with each other. Against this interpretation, it can be urged, in addition to the wording, that even in the appendix to the third book of his work, Hume emphasizes that color ideas are simple ideas without as much as mentioning extension.⁷¹

But if one now takes the passage as it is, then the contradiction cannot be avoided. For what is an idea of color, even if it were the most determinate shade, other than an abstractum? And what goes for color also goes for taste, etc., in short, for each "simple idea". One could perhaps adduce in defense of Hume that he speaks not only of simple ideas but also of simple impressions and that the former could just as well be considered as copies of the latter, just as compound ideas are copies of compound impressions, and that therefore the acceptance of simple ideas does not involve an act of abstraction. If one takes Hume's theory of space into consideration, particularly

with respect to the connection of color and extension, this objection is not without a point. We shall see that according to Hume one can perceive colored points which are unextended, with the idea of extension being excited in us only by their arrangement. Thus in this case we perceive [227] color without extension. But even if this were correct, one would therefore perceive not only color. We would indeed have colored points which at the least could not lack a place determination. Moreover, this side of the question does not even enter the apple example. The color of the apple is (if only because of the differences in hue) the color of a surface, that is, according to Hume, of several points whose arrangement is of course also perceived. That makes it much more natural to interpret Hume's view so that we receive only complex impressions, and arrive only through the analysis of the complex ideas copying them at their simple elements, which then in turn permit the inference to their simple originals. Hume himself confirms this interpretation in the second proof, to be discussed presently, of his thesis, when stating that "no impression can become present to the mind, without being determined in its degrees both of quantity and quality."⁷² If there is no impression without determinate degree of quality and quantity, then there is certainly none without this quality and quantity themselves. Hence no simple idea can be formed except by abstraction.

That seems really so obvious that one might refer only to the question whether or not quantity and quality can be conceived without determinate degree, leaving aside as merely an inaccurate formulation

whatever seems to drag in the whole of the theory of abstraction. Yet, on the other hand, statements of this latter kind are so vigorous and Hume speaks of himself so explicitly as an advocate of Berkeley's theory, that one finally agrees with the traditional interpretation of Hume's doctrine, eliminating the contradictions among his claims which that involves by supposing that he fumbled his expressions. The solution is not satisfactory. We are up against one of those cases where objections [228] against each of the two possible interpretations can be maintained.

Let us now examine in detail the force of the three arguments which Hume presents in support of his negative claim.

The proposition with which Hume opens his first proof and which also is repeatedly used in the later parts of the Treatise appears highly doubtful. How shall we understand the equating of the different with the distinguishable? Is that distinguishable which, supposing unlimited discrimination by the senses of even the least differences, could not be considered as equal? If so, the proposition is tautological and of no practical use. If not, then it is false, unless one wanted to claim that, for example, the nebulae, which W. Herschel is known to have taken all for systems of stars, were at that

time all alike and that some of them changed into glowing games only through the application of spectral analysis in exploring them.

But far more important for the proof than this first proposition is the one which immediately follows it, namely, that everything distinct can be separated. One is at first surprised that a polemic against the existence of abstracta contains, against the separation theory in Locke's sense, a concession larger than any defender of abstraction would make today. A reference to the cases already touched upon of the inseparable association, so-called, suffices to bring home the import of this concession. Hume, however, draws from it quite correctly a conclusion in his favor. Nor, if his examples suffice, can one object (at least not in favor of separability) against his drawing this conclusion.

But can one concede that the determinate length of a line is neither distinct nor distinguishable from the line itself? If the length and the line are not different, then they are the same. With the length the line is also given. Whether the latter is straight or bent, whether it lies in this or that plane is then completely immaterial. For if the length is the same as the line, then the line is also the same as the length and nothing else can come into consideration. [229] No less strange consequences follow from the second example. The degree of a quality is supposed not to be different from the latter. Therefore, the degree is the same as the quality, i.e., pink is the same as red. But dark red is also the same as red; hence pink is the

same as dark red. Or, in case one supposes pink to be different from dark red, then red is different from red.

After what has been said, no doubt is left about the value of the argument examined. Hume not only has proved what he wanted to prove. By holding that everything distinguishable can also be separately conceived, he has put into his opponents' hands new weapons enabling them to vindicate their theories far beyond the boundaries of truth.

The second argument, we have seen, starts from its being contradictory to allow an impression which is not determinate with respect to the degree of quantity and quality. But another remark of Hume's, to which Green justly called attention,⁷³ is opposed to this. In discussing the immateriality of the soul,⁷⁴ Hume favors the theory "condemned by several metaphysicians," "that an object may exist, and yet be no where." He continues: "An object may be said to be no where, when its parts are not so situated with respect to each other, as to form any figure or quantity; nor the whole with respect to other bodies so as to answer to our notions of contiguity or distance. Now this is evidently the case with all our perceptions and objects, except those of the sight and feeling. A moral reflection cannot be plac'd on the right or on the left hand of a passion, nor can a smell or sound be either of

from the few passages we quoted in the course of our exposition, by the fact that Berkeley indiscriminately speaks once of ideas, and once of objects. In the Treatise, sect. 1 and 2, "ideas" and "objects of human knowledge" are expressly equated with one another. There can therefore be no question of opposing the two to each other when it comes to the signification of names. It rather appears to follow from the above-mentioned examples that Berkeley was here guided by two very different points of view. Words such as soul and mind do not stand for ideas because according to Berkeley's metaphysics we can have no idea whatever [191] of the active bearer of ideas.¹⁵ As to power, it would at least be plausible to appeal to the inactivity of the ideas. Berkeley does not do that. As to number, he could not do it; and the same goes for such words as chance and fate,¹⁶ which are mentioned in the same context. What, then, could Berkeley have had in mind? Since he himself did not further clarify the point, one can only offer a conjecture. It is perhaps most plausible to think of those words of which, speaking as one ordinarily does, one usually says that they do not designate particular things but, rather, attributes or relations. If all general concepts are by their nature concrete, then it must be at least very doubtful whether a "precise" idea can correspond to objects which, as such, do not exist at all. In the case of the word number, for instance, it does not suffice to think of two or three; for one cannot form a concrete idea even of them, but only of things counted. In such cases we employ words which, though far from being meaningless, are yet words

[230] a circular or a square figure." How much of this may be granted, how much must be rejected, we shall perhaps learn from some later reflections. For our present purpose it suffices to have established that Hume himself admits the possibility, indeed, the existence, of impressions without quantity. Thus he cannot claim, without openly contradicting himself, that all impressions are determinate with respect to quality or even a degree of quantity; or he can make this claim only in a very special sense. Moreover, on the other side, it has already been noted above that there are qualities which do not even admit of a determination of degree, such as, for example, triangular and quadratic (not to mention relational qualities).

The second step which Hume takes in this proof contradicts a principle which he himself has embraced earlier, namely, that of "the liberty of the imagination to transpose and change its ideas."⁷⁵ To be sure, Hume has already asserted earlier that impressions differ from ideas, only by their greater intensity. Yet he did not assert this of complex ideas, but only of the elements. Of the former it was said explicitly "that there are not any two impressions which are perfectly inseparable."⁷⁶ For the proof under discussion, though, this contradiction becomes practically unimportant if only it can be shown that Hume takes an idea of a quantity or quality of determinate degree to be simple. With respect to the latter, at least, he has expressly emphasized this in the appendix to the third volume of the Treatise where the discussion as to whether similar ideas could be simple, concludes with these words: "'Tis the same case with all the degrees in any quality. They are all resembling,

and yet the quality, in any individual, is not distinct from the degree."⁷⁷
 [231] In his own eyes Hume thus seems to be more or less justified in this point.

But can we, too, admit that the impression of the quality makes together with that of its degree a simple whole, of which the imagination can alter only the intensity? If Hume were right, we obviously could conceive only those degrees of quality of which we have received an impression, except to whatever extent there are innate ideas. For, in imagining another degree of the same quality, we would have separated the idea of the latter from those of all the degrees of it which have been known so far, since, obviously, we could not at the same time imagine the quality in a degree known to us by direct experience as well as in a new one. Hume himself, however, at another place, has adduced a case in point, although without being able to explain it. He believes⁷⁸ it to be the exception from the law that each idea is a copy of an impression, that if, e.g., one had experienced all the shades of blue except one and all the shades known to him were presented to him in a series, he would not only notice the gap, but also be capable of supplying the appropriate idea. But other cases of this kind are also familiar to us: If the brightest white we have ever seen is presented to us, we can imagine a still brighter one. If a tone is played by as many instruments as we have ever heard together, we can imagine the tone still stronger and still more fulsome; and so on. If, as Hume must consequently admit, these and similar cases really contradicted the empiricist theory of knowledge, the latter would

fare badly indeed. It is thus fortunate for the theory that the explanation of this case becomes rather obvious if one realizes that together with two ideas we are able to present their relations and that the members of different pairs of ideas can stand in the same relation. It is easy [232] to convince one's self anytime that in wanting to reproduce series of ideas, these relations often play a far greater role than the ideas themselves. One who sings a song which he has heard, even if he is a very skillful musician, will only rarely also reproduce the key (unless he has paid special attention to it). What, then, did he really remember? Perhaps the tones themselves and their sequence. Certainly not, or else he could not have sung the song a third or fifth lower than the key in which he had heard it. What he did remember were thus only the tone intervals and their sequence. Their transposition to the sequence determined, perhaps entirely by chance, through the intonation, then takes place without any difficulty whatsoever. In the example above one dealt with transpositions of this sort which are, as it were, represented by the formula

$$a:b=b:x$$

where a and b are given and x can be determined. Had we perceived each color of the spectrum instead with only one degree of brightness, each tone only with one degree of loudness, then we could not form the ideas of other degrees or, if we could, then it would not be explained empirically. But if with the different degrees their relations to one another are also given, then we are in a position to make transpositions beyond

the limits of experience.

This is how the objection Hume himself raises against empiricism collapses. But his claim that the idea of a quality of a determinate degree is simple meets the same fate. We imagine the tone, which we have heard softer, louder than we ever heard it; it has remained the same tone, essentially the same quality, only different in degree—and since the new idea of degree cannot exist together with the old one, a separation of the latter from that of the quality had first to occur, otherwise the former could not have occurred. We are of course far from assuming that one can imagine a quality without a degree, or, even worse, a degree without some quality of which it is a degree. We believe on the contrary that a quality and its degree are in this respect like color and extension. No one is capable of imagining a color without an extension, but for no one is the color inseparably connected to some determinate extension, as would necessarily be the case if they both constituted a simple impression. It is therefore not the purpose of our polemic to defend Locke's theory of separation. As it happens, though, not only this theory but also our view on abstraction are challenged by Hume's assertions. If quality and degree together were really something simple; if their impressions and their ideas could not differ except by the intensity of the one inseparable idea, then attention could not conceivably concentrate on a part of it, since, obviously, there would not be any parts. This does not of course prove the correctness of the view which stresses this concentration, but it does dis-

prove Hume's second argument, whose examination was the task we had undertaken.

Turning to the discussion of the third argument, we must first of all eliminate some misunderstandings which may be due to equivocation. If the proposition: "that everything in nature is individual" means "that every thing in the world is individual," then no one will hesitate to accept this assertion as analytic; just as every one will have to agree that the idea of each "thing in the world" is individual provided only that what one has in mind is the idea corresponding to this one thing, i.e., its individual idea. Nor need one deny that to form an idea of something, or simply to form an idea, is one and the same, i.e., in other words, [234] that each idea has an immanent object, even though against the reason which Hume gives (into which we can as yet not enter) objections can be raised. What is beyond comprehension, at least at first sight, is, rather, that the conclusion that every idea must be individual follows from these two premisses. But suppose one argues as follows: every object in the world is individual (and also, hence, determinate with respect to quality and quantity), hence also the

idea of each object; but every idea is the idea of an object, hence each idea is individual (i.e., determinate in the way just indicated). If, I say, one argues in this way, then there appears to be an inference, but this appearance is caused by an equivocation with respect to the word object. In the first and second premise it designates a thing which is real and exists by itself; in the third premise it designates an immanent object, or, at least, intentional object which may perhaps be said to have external existence, though certainly not necessarily independent existence. The formal error would be removed if one took in the third premise the word object in the same sense as in the first two. But then the third premise is false, since not every idea is the idea of a really and independently existing thing. E.g., I imagine red, blue, straight, heavy, and so on. These are properties of such things, but not themselves things. I think of Apollo, or, to use Hume's favorite example, of a golden mountain. Then I have ideas to which nothing in reality corresponds.

There is still another possible interpretation in which Hume's inference might appear to be valid, namely, if we translate the English proposition by "everything in the world is individual,"⁷⁹ and then continue: hence every idea of something is individual, but every idea is the idea of something, etc. This time, though, even if everything else were correct, the first premise, far from being analytic, is only just [235] false. For if one calls individual what either is itself an individual or can refer to only one individual, then all individual

things do fall under this concept. But there is on the other hand not a single attribute which, considered by itself, can be predicated of only one individual. Attributes are none the less real than the things in which they inhere. Hence, not everything in the world can be called individual.

One sees that, however one turns Hume's proof, one comes very soon either upon a formal error or upon a material mistake. Whichever of the two interpretations here attempted the Scottish philosopher may have had in mind, an equivocation is involved in either case. In the first, we noticed, it lies in the word object: in the second, the illusion may plausibly be traced to the word everything which, if equated with "every thing," easily acquires a misleading second meaning.

And there is still another major mistake in this proof. What for brevity's sake we just called the second premise without further examining it, is itself supposed to follow from the first proposition. But how can the second proposition follow from the first, even if we interpret the latter so that it asserts a truth? If it is absurd to suppose that there is a thing in the world whose quality and quantity is not of determinate degree, and if therefore one must imagine every thing as thus determinate, does it follow that every idea of such a thing also necessarily bears all of these determinations? To accept this assertion would be just as mistaken as to accept the following one which was rejected earlier (and which in part coincides with it): because an individual has infinitely many characteristics, the content of an individual

concept must be infinitely large.⁸⁰ Moreover, as we have already had opportunity to emphasize, it is not the case that an idea of an individual [236] is necessarily an individual idea. Yet only if this were the case could one infer from all things' being individual that all ideas are.

Still something else strikes one as odd about this proof. The explicit contrast in it between the real and the conceptual hardly agrees with Hume's views elsewhere on this point. But Hume's metaphysics will occupy us only later. For the time being, therefore, I merely call attention to this striking circumstance.

Looking back for a moment at the results we have so far achieved, we cannot but notice that they are all negative. The thesis which Hume proposed as a new and conclusive reason for Berkeley's rejection of all abstract ideas is too weak. The arguments to support it do not, for a variety of reasons, prove what they are supposed to prove directly and even less what they are supposed to prove eventually. Yet we saw that Berkeley's polemic against the views of Locke is in the main justified. Hence, Hume added nothing new and tenable to this polemic. It does not follow that, even aside from the historical interest, one would be justified in simply ignoring Hume's attempt to develop the positive

side of Berkeley's theory, particularly since Berkeley's position has turned out to be the weaker part of what he has to say.

The fact to be explained is, as we know, that the ideas which [237] according to Hume are concrete can nevertheless have general signification. His alleged solution has been stated above, virtually in extensio, for a reason which may not reflect favorably on me, particularly since this explanation has already been stated so often without anyone taking exception to it. The reason is that in spite of all effort, I did not succeed in gaining complete clarity as to what Hume himself thinks the process described above really is. Nor have the observations been cleared up for me by the presentations of Jodl⁸¹ and Pfleiderer⁸², who are rather cursory at just this point. Perhaps Hume himself is to be blamed for these obscurities. If so, then it is a duty of the critique to point that out.

The starting point of his theory is completely intelligible: we call similar objects by the same word. Hume could have supported this by appealing to the law of association through similarity, which makes it understandable that, having named an object and encountering one similar to it, we spontaneously reproduce first the former object and then also the word for it. This suggests using the word also for the second object. This mediate association soon becomes an immediate one and may step by step extend to a whole series of similar objects. If now we hear the name, then some one of the associated individual ideas enters into consciousness, which one it is depending on circum-

stances that are accidental. But how about the other associated ideas? They are, Hume tells us, not really but only dispositionally presented to us. Since when?—only since that name has been mentioned again? That seems to be what Hume means; but must not there have been already a disposition to conceive the individuals in question since eventually with [238] the help of the word they were all reproducible (and I say all because it was not a priori determined which of these ideas the heard word would elicit)? That need is beyond doubt; the difference is at most one of degree; the disposition after hearing the word is stronger than before. But however strong it may be, the disposition to have an idea is never itself an idea. The idea explicitly elicited by the word remains what it was, namely, particular, and so does the word.

The more astonishing it is when Hume now declares that the word produces in addition to the individual idea a habit (i.e., I suppose, the disposition mentioned?)⁸³ and that this habit in turn produces another individual idea "for which we may have occasion." There is only one way to make sense out of this. Each habit is a permanent, necessary condition of the mentioned idea; each "occasion," its temporarily last cause. Then the whole theory stands or falls with this occasion. Must there be such an occasion every time we hear the word? Hume says nothing about it. Nor can I think of any reason why this should be necessary. Yet, if there is no such occasion, generality is again out of the question.

What sort of occasions there are we are told only in passing,

supposing that we are justified to bring in that "intention or necessity" which, as we heard, determines the particular idea which is conceived by virtue of that disposition. Hume tells us nothing about the number of occasions which can become operative in the case of a single word. But it is presumed that there must be several of them since from this indirect way several ideas can be brought to consciousness. However, it is impossible to conceive all the individuals which are attached to that name (why, if it is possible to conceive several?). We are therefore [239] satisfied with a "partial consideration"; where it remains unclear whether this deficiency leads to a merely partial consideration of the content or of the extension of the concept in question (if, for a moment, I may avail myself of the correct use). At first the latter seems more plausible. Yet the former cannot be rejected out of hand. This we shall see when attending to what Hume has to say about the "distinctio rationis".

All the interpretations which seemed plausible become dubious again in the light of Hume's later comment that, before habit is established, we form instead of one idea, several ones, one after the other, in order to elucidate the sense of that word. There is no doubt that this is supposed to be something entirely different from the process above. But wherein, supposing that we have understood Hume correctly so far, lies this difference? What makes this gathering up of the several different objects designated by the word possible, if not the associations connected with the word, which are what Hume had earlier

called the habit? For a moment, but only for a moment, one might think of associations among the ideas themselves by the law of similarity. Let us stay with Hume's example; suppose that we illustrate the meaning of figure by imagining a concrete circle. Since the latter also has a color, suppose that it is white. Thus we could by the law of similarity associate it with either snow or sugar as well as with a white square. Nor does it make any difference with respect to the first case that we here conceive one object after the other. For, although the habit establishes a disposition for all associated ideas, we can yet not be conscious of all of them simultaneously, even though we may conceive some or even many of them.

As I have said already, I do not know how to resolve the difficulties I have pointed out. Should a better mind succeed in making clear [240] what I find obscure, I shall be grateful. In the meantime I believe to have established that Hume's theory here suffers from obscurities which one may gloss over in presenting it but which really cannot be cleared up through interpretation.

It goes without saying that under the circumstance the scope of the objective criticism is rather limited. Even so it will be of some value, partly because we may expect to gain in this way new material for

characterizing the researches before us, but also because it will clarify the prospect of an attempt one might make to develop Hume's theory without changing its foundations.

Hume's first step, the use of the same word for similar objects, even if considered from his point of view, already produces some inconveniences. To be sure, we have ourselves supported this principle by pointing to association by similarity, just as it is now far from us to underestimate its importance for forming general names. But it must also be pointed out how little association without abstraction can accomplish in this respect. Suppose we have something circular before us; it is a circle drawn, or a circular piece of paper, or a millstone (since according to Hume we cannot think a circle in abstracto) and call this something figure.⁸⁴ One may emphatically assert that upon seeing, say, a quadrangular bounded cornfield, there would not be the slightest tendency for us to remember that "figure" as similar and therefore give to the field the name figure. If, however, we are capable of thinking of shape in the abstract, then everything is simple. But that is precisely the supposition which Hume admits least of all. The difficulty increases, of course, as the name becomes more general. Shape, for instance, the [241] word just used, can be applied to all objects in space. Thus it is grounded in a similarity which, if one can consider the object only in all its detail, is much too pervasive and therefore much too inconspicuous to establish an association.

Moreover, if Hume is amazed at the stability of the above

mentioned "habit" which makes it possible for the same particular idea to become without misunderstanding connected with different general words, then the factual basis which this obviously must have is still more amazing. For how did one, before the habit was formed, ever hit upon giving the quite different names to one and the same particular idea, e.g., to call the same thing once a millstone, once something round, once something white, once something heavy, a body, such that things similar among themselves are always given the same, rather than indifferently once the one, once the other of them many names, as would have to be expected in case the similarity always manifested itself effectively only in respect to the whole thing rather than with respect to a single attribute? One thing at least is beyond doubt in all this confusion. The same word is used for very many and very different things; the same thing is called (and so far, it would appear, without any ground whatsoever) by a very great number of different names. Thus it remains unintelligible how under circumstances so unfavorable any noticeable association between word and idea could be established.

Assume, however, that in spite of all these objections, associations could be formed in exactly the way Hume postulates. A new difficulty arises as soon as we attempt to use in judging the "general idea" which has been formed in Hume's way. For it is easily seen that on Hume's theory that the latter loses all significance. Suppose I make the statement "Wolves are mammals." What I have said is chiefly or primarily about words; as far as things are concerned, all one can infer is

some similarity, which the association with the word mammal presupposes. But since the same objects are also associated with many other names, such as e.g., organic object, practically nothing is gained by knowing that there is some similarity.

But even if this is waived, there still remains the peculiarity of the so-called foreshortened process, as it usually takes place according to Hume. It is plausible enough that when one thinks of an attribute, an object that has it comes to mind. But that does not mean that if we conceive an attribute, an object which does not have it would come to mind. This would indeed not only be "one of the most extraordinary circumstances," as Hume himself thinks, but it would outright contradict all known observations of association and reproduction. Thus a voluminous documentation from analogous cases would be required if an attempt at an explanation of this sort is to become even reasonable, let alone plausible.

Nor did Hume completely ignore the proof by analogy, although he did not use it in connection with the point just mentioned but, rather, in order to support his theory in another way. But the cases on which he draws turn out to be little suited to this purpose. The reproduction of verses with the aid of the first word is after all no more than an example of the simple association of ideas, the existence of which Hume no longer needs to establish at this point. If, however, he appeals to similarity as an aid to reproduction, then it must be said we know already from the above considerations how doubtful an ally similarity is

for Hume's theory. The object called into consciousness by the word will as a rule be similar in some respect (as a defender of abstract concepts, but not Hume, may put it) to other things which do fall under the word as well as to others which don't. Hence, if similarity helps reproduction in Hume's sense on the one hand, it will on the other hand equally facilitate confusions. The two remaining examples relate to the [243] above mentioned case (p. 134) of the correct use of words of whose sense we are either not at all or only partially aware at the moment. They have no recognizable analogy to Hume's theory of abstraction.

Let it be pointed out in conclusion that, even if nothing else stood in the way of Hume's hypothesis, it still could not possibly explain everything one usually includes under the phenomenon of abstraction. There is plenty of talk about family traits relatives are supposed to share, about national types, about national character, also about the style of a literary or artistic period. There is much in all this that is not clear; yet it is a matter of observations that have actually been made, observations of properties common to several or to many individuals. Hence, ideas of these attributes are general concepts, of which hardly anyone will deny that the communality had first to be observed as such before a name, if any, was given to it. In such cases, therefore, it surely is the name which receives its generality through the concept, not the concept through the name.

In this context we must once more attend to judgement, if only because here Hume's analysis proves to be completely inadequate. Whom

do we intend by the proposition: "All men are mortal"? Only those whom we have seen or whom we have thought individually? Surely this is not so; everyone thereby intends something concerning all men, those who now exist, those who have existed and those who will exist. Yet it is manifest that all the ideas of all these men cannot each have entered into association with the word man and that therefore the general proposition, if limited to the extension required by Hume's theory, would completely lose the character of generality. This is obvious enough.

Perhaps some readers will have missed in this exposition of [244] Hume's theory of abstraction, and even more, in its criticism, some consideration of what our philosopher has to say about the "distinctio rationis". Such readers may even charge me with thoughtlessness or partiality when I raised objections against Hume which could possibly have been disposed of in his favor with the help of this distinction. This very possibility may cause the misunderstanding that what Hume says about the distinctio is an essential part of his theory of abstraction,⁸⁵ while on the contrary he mentions it only as an after thought, stressing that in order "To remove this difficulty we must have recourse to the foregoing explication of abstract ideas."⁸⁶ All he has in mind is thus an application of principles previously established. This application,

whether it in fact leads to true or false results, is not as such evidence either for or against the principles unless one also examines whether the latter have been correctly applied. This examination presupposes in turn the fullest possible understanding of the theory to be applied.

Moreover, Hume himself does not claim that his application is a proof of the theory. The proof he attempts rests, as we saw, on entirely different grounds. Thus we were not unfair to him when we examined the theory as it stands and held it responsible for the inconveniences to which, it would seem, it leads. Moreover, if we are right, if the very fact that the application may tend to eliminate certain difficulties which have been correctly inferred from those principles, then this very application appears from the very beginning in a rather dubious light.

Nor is it hard to see how little this application can do to clarify the obscurity which envelops the theory. The issue is the distinction between the figure and the body figured, between motion and the [245] body moved. "The difficulty," writes Hume, "of explaining this distinction arises from the principle above explain'd, that all ideas, which are different, are separable. For it follows from thence, that if the figure be different from the body, their ideas must be separable as well as distinguishable; if they be not different, their ideas can neither be separable nor distinguishable." The dilemma seems clear enough and if a few lines below one comes upon Hume's assertion, that figure and body figured are "in reality neither distinguishable, nor different, nor separable," one cannot but think that the issue of dis-

distinctio rationis has been decided in the sense that there is no such thing. But Hume argues differently. The mind, he suggests, would have never even dreamed of such a distinction, "did it not observe, that even in this simplicity there might be contain'd many different resemblances and relations." In the idea of a white marble globe, for instance, we can in fact neither separate nor distinguish color and figure, but comparing it with a black globe and with a cube of white marble yields two different similarities. With a little practice we now distinguish figure and color, i.e., we consider both together, "since they are in effect the same and indistinguishable, but still view them in different aspects, according to the resemblances, of which they are susceptible. When we would consider only the figure of the globe of white marble, we form in reality an idea both of the figure and the colour, but tacitly carry our eye to its resemblance with the globe of black marble: And in the same manner, when we would consider its colour only, we turn our view to its resemblance with the cube of white marble. By this means we accompany our ideas with a kind of reflexion, of which custom renders us, in a great measure, insensible."³⁷

If Hume expected to clarify the distinctio rationis by his theory of abstraction, then we know now that all he has made use of from the latter is the doctrine of the inseparability and indistinguishability of identicals. But, then, one must question [246] whether Hume reached this conclusion by means of this doctrine or, rather, in opposition to it. Hume, as we saw, always sticks with the

doctrine. He repeats and repeats that colour and figure are identical and indistinguishable. If so, then it remains a riddle how colour and figure come to be distinguished at all, be it through the most complicated mental operation. This riddle Hume has not helped to solve. Nor probably could anyone solve it.

This is one contradiction; but still another must be stressed. In the example of the globe and the cube, there is talk of perceiving the two different similarities. Similarity, we saw, plays indeed a large role in Hume's theory of abstraction. We, though, wherever it mattered, have always made a point of giving this relation its due as the fact which contributes to the establishment of association, while at the same time keeping away from the idea of similarity. The reason for this was simple: If the degree of a quality is neither different nor distinguishable nor separable from the latter, nor the latter itself from the body in which it inheres, then the same must hold for a relation and its relata. Hence, according to Hume, one could at most conceive two similar things, but never similarities. Still more far fetched would be the thought of forming ideas of relations between attributes. And since such relations would be necessary for discovering that a thing is similar to several others in different respects, we believed that we ought to disregard this possibility also where it could help Hume's case. What are we to say if this assumption which is thought to be impossible, now becomes the key to the notion of the distinctio rationis? By itself, this circumstance surely has not the slightest tendency to allay our

earlier doubts. Quite to the contrary. We come here upon a factor which makes any explanation of this completely untenable. In order to arrive at a distinction between figure and the body figured, we [247] must, as explained, first notice two different similarities—I say similarities. Does that not presuppose the distinction between similarity and the similar objects? This much is certain. Hume has explained the distinctio rationis by—the distinctio rationis.

Throughout this exposition and analysis of Hume's doctrine of abstraction I have virtually ignored what I tried first to establish independently. Such restraint is probably the best protection against any bias. For if we tested the theory by itself and on experience, as it were, prejudice for or against should not get the better of us in deciding whether or not it has passed the test.

After having arrived at a result in this way, we can easily spot the point which made the failure of the attempted explanation inevitable. The two fundamental errors of Hume's theory of abstraction are the neglect of the content of the concept and the introduction of the association of ideas for deriving the phenomena or the extension of the concept. So we may without further argument recall what has been said earlier when showing how little a concept's extension has to do with the association of ideas. The complete inadequacy of Hume's asso-

ciation hypothesis serves only to illuminate this truth even more brightly.

Under the circumstances a doubt might arise. Do arguments which have proven so untenable in every respect and which therefore surely could not have had a great impact on the thought of Hume's successors—do such arguments, I ask, deserve to be examined in such detail? Two things may be said. First of all, misguided as it was, Hume's attempt to derive the generality of universal concepts from association [248] was yet a step, and indeed one of the first steps, in a direction which since Hume has become very important for the development of the empiricist school, by making its philosophy into what is really a philosophy of the association of ideas. J. St. Mill, when discussing the issue of abstraction was moved to say "that hardly anything universal can be affirmed in psychology except the laws of association."⁸⁸ This is not only characteristic of the excessive role which this no doubt important principle plays in contemporary English psychology; it also illuminates the unmistakable influence which for a century Hume has had on the thought of his compatriots. For it requires only a glance at the way in which J. Locke, at the end of the second book of his Essay, treated the phenomena of the association of ideas in order to recognize that it was Hume who gave the first real impetus to the use of association in the scientific explanation of psychical phenomena.

Secondly, although what has been said refers not only to Hume's theory of abstraction, though certainly also to it, we must yet recall,

with respect to it alone, what has been earlier said⁸⁹ about Hume's relation to Berkeley. Nominalism's being today the dominant doctrine among the English empiricists is a fact which, as we know, does not have its source and origin in the famous introduction to Berkeley's Treatise, but, rather, in the theories of Hume which we have here examined.

It is not true, though, that if one wanted to judge modern English nominalism by what J. St. Mill, who considers himself a nominalist, has said about abstracta, one could easily arrive at the opinion that this "nominalism" is itself no more than an empty name and that [249] therefore Hume's influence has not been very substantial in this respect. Mill's importance justifies quotation of the most relevant passage from his book on Hamilton.⁹⁰

"The formation, therefore, of a Concept," we read here, "does not consist in separating the attributes which are said to compose it, from all other attributes of the same object, and enabling us to conceive those attributes, disjoined from any others. We neither conceive them, nor think them, nor cognise them in any way, as a thing apart, but solely as forming, in combination with numerous other attributes, the idea of an individual object. But, though thinking them only as part of a larger agglomeration, we have the power of fixing our attention on

them, to the neglect of the other attributes with which we think them combined. While the concentration of attention actually lasts, if it is sufficiently intense, we may be temporarily unconscious of any of the other attributes, and may really, for a brief interval, have nothing present to our mind but the attributes constituent of the concept. In general, however, the attention is not so completely exclusive as this; it leaves room in consciousness for other elements of the concrete idea: though of these the consciousness is faint, in proportion to the energy of the concentrative effort; and the moment the attention relaxes, if the same concrete idea continues to be contemplated, its other constituents come out into consciousness. General concepts, therefore, we have, properly speaking, none; we have only complex ideas of objects in the concrete: but we are able to attend exclusively to certain parts of the concrete idea: and by that exclusive attention, we enable those parts to determine exclusively the course of our thoughts as subsequently called up by association; and are in a condition to carry on a train of meditation or reasoning relating to those parts only, exactly as if we were able to conceive them separately from the rest."

[250] After having occupied ourselves so much with polemics, it will perhaps be appropriate to mention an account of the act of abstraction with which we can quite thoroughly agree, provided only we disregard the nominalistic formulation. Even so, this proviso requires emphasis, since the point is of the essence, not only in our context but for the whole of modern English philosophy.

I am speaking of J. St. Mill's so-called nominalism, and we must here once more refer to the definition, used above⁹¹, which Mill himself gave of this word. If the nominalist's essential claim is in fact that names are the only universals which exist, then everyone will at least admit that the passage here reproduced hardly proves its author to have been of this opinion. It is true that he then continues: "What principally enables us to do this is the employment of signs, and particularly the most efficient and familiar kind of signs, viz. Names." This alone, though, does not suffice to make Mill's theory nominalistic in the above sense. Even if one supposes what would here lead us too far to investigate, that Mill was right in this point: i.e., if one supposes that a generalization never occurs without names, this only means that the name is a conditio sine qua non of generalization, but not that the latter consists of it. On the contrary, Mill himself spoke of the concentration of attention on certain parts of the concretum. This attention, by whatever it may have been caused, is itself a psychical act. The concept to which attention is at most directed as a whole differs psychologically from the concept some of whose parts are distinguished from others [251] by attention. Nor does the difference lie in the number of parts, as Locke thought, but rather in the relations of the elements of the idea to one another and to the subject to which they are presented. The difference between these concepts, the concrete ones on the one hand and, on the other hand, those we called abstract, is unmistakable. On Mill's own theory, accordingly, "generality is not an attribute solely of names, but

also of thoughts. External objects indeed are all individual, but to every general name corresponds a General Notion." But this is precisely the characterization which Mill⁹² himself gives of the conceptualist, among whose opponents he counts himself.

It is clear that if the whole matter were one of names only, there would have been no reason for a detailed discussion here, particularly since the application of the designation "nominalism", for which Mill might have had an understandable preference, to his theory could at least in a certain sense be justified. But this sense is one which neither J. St. Mill himself nor anyone else commonly associates with this word. That is why the claim that Mill is a nominalist, even if he himself makes it, cannot but be false.

One thing is thus beyond doubt. Hume had no influence worth mentioning on J. St. Mill's views concerning abstraction and generalization. Does this also hold for the rest of the supporters of nominalism? Is Hume's theory really so obsolete that nothing remains of it except the name by which they call themselves?

A comment of A. Bain seems to support the belief that this is so. "We are able," he says,⁹³ "to attend to the points of agreement of resembling things, and to neglect the points of difference; as when we

think of the light of luminous bodies or the roundness of round bodies. This power is named abstraction." But one only need read on a little [252] in order to recognize one's error, at least with respect to Bain. About a page after the above passage⁹⁴ we find the following: "Hence abstraction does not properly consist in the mental separation of one property of a thing from other properties—as in thinking of the roundness of the moon apart from its luminosity and apparent magnitude. Such a separation is impracticable, no one can think of a circle without colour and a definite size. All the purposes of the abstract idea are served by conceiving a concrete thing in company with others resembling it in the attribute in question; and by affirming nothing, of the one concrete, but what is true of all those others." It will hardly be necessary to remind the reader of Hume's example of the marble globe and the marble cube in order to convince him that all Bain did was to take Hume's theory of the distinctio rationis as the basis for his own explanation. Any "nominalism" that appeals to this explanation is no doubt real enough. For everyone must admit that the process Bain describes is not an abstraction, even though not everyone may grant that genuine generality can be attained in this way.

To follow step by step the development which the theory of abstraction has taken in England since Hume would far exceed the limits we

have set to ourselves. We can only show in illustrations the points of contact with Hume. To this purpose two recent thinkers will be mentioned.

The first is James Mill, who discusses the question of generalization in the eighth chapter of his Analysis of the Phenomena of the Human Mind: "Man," he says, "first becomes acquainted with individuals. He first names individuals. But individuals are innumerable, and he [253] cannot have innumerable names. He must make one name serve for many individuals." What is needed is thus a means of abbreviation and names do this job. For names mark equally "a number of individuals, with all their separate properties," allowing one to speak of many at once.⁹⁵ "Words become significant purely by association" with an idea.⁹⁶ If, e.g., the word man is first applied to only one individual, then it becomes associated with the idea of the latter and acquires the power to call it forth. The same holds of its application to a second individual, to a third, and so on, until the word "has become associated with an indefinite number . . . of those ideas indifferently." This is in fact what happens whenever this word occurs and by thus "calling them up [i.e., these ideas] in close connection, it forms them into a species of complex idea"; just as also on other occasions association forms complex ideas out of an indefinite number of ideas.⁹⁷ "It is also a fact, that when an idea becomes to a certain degree complex, from the multiplicity of the ideas it comprehends, it is of necessity indistinct," e.g., the idea of a thousand-sided figure, of an army, of a forest, and so on. If in this way "the word man calls up the ideas of an indefinite number of

individuals, not only of all those to whom I have individually given the name, but of all those to whom I have in imagination given it or imagine it ever will be given, . . . it is evidently a very complex idea, and, therefore, indistinct; and this indistinctness has, doubtless, been the main cause of the mystery, which has appeared to belong to it."⁹⁸ "It is thus to be seen, that appellatives, or general names are significant, in two modes; . . . the simple ideas . . . concreted into a complex idea in the case of each individual, are one thing signified by each appellative; and this complex idea of the individual, connected with another, [254] and another of the same kind, and so on without end, is the other of the things which are signified by it. Thus, the word rose, signifies, first of all, a certain odour, a certain colour, a certain shape, a certain consistence, so associated as to form one idea, that of the individual; next, it signifies this individual association with another, and another, and another, and so on; in other words it signifies the class."⁹⁹

The last formulations strongly invite comparison with Hume. As the latter, so does James Mill attempt to show that generalization is a special case of the association of ideas. There as well as here the name first is attached to the individual and always arouses first the concrete idea of an individual with all of its determinations. There, as here, the latter is followed by a specific psychical phenomenon which has its origin in the concurring association of different individual concepts to the same name and which, because of the great number of these

individuals, is affected by a certain obscurity, what Hume speaks of as the merely virtual presence of the individual ideas, Mill as the indistinctness of his complex idea. I am not here concerned with criticizing Mill. One thing, though, is clear at a glance. Hume excels him in at least one respect. He at least pointed out that a lawful association cannot occur without that similarity, which James Mill completely ignored.

Many a reader will perhaps be a little surprised to encounter as the second and last name in this context that of H. Taine. He probably remembers the description which the author of Positivisme anglais, in his somewhat rhetorical way, has given to abstraction. "A new faculty appears," he says, among other things, in the mentioned work,¹⁰⁰ "the [255] source of speech, the interpreter of nature, the mother of religion and philosophy, the only real difference which, according to its degree, separates men from animals, the great men from the insignificant,—I mean abstraction, which is the capacity to isolate the elements of facts and to consider them separated." One may well wonder what this undoubtedly conceptualist thinker does among the nominalists, just as one may be at having this Frenchman dragged into a study of English philosophy. Both objections disappear as soon as one considers the detailed exposition which this brilliant writer devotes to the same subject in his later work, "De l'intelligence."¹⁰¹

"If we investigate," says Taine in this book, "what occurs in us when we extract a general idea from several perceptions, then we

never find in us anything other than the formation, completion and preponderance of a tendency which elicits an expression, and among other expressions, a name."102 "When we have seen a series of objects, endowed with a common quality, we experienced a certain tendency, a tendency which corresponds to the common quality and only to it We do not perceive the general qualities or characteristics of things. We only experience in their presence such and such distinct tendency which in spontaneous language results in similar mimicry, and in our artificial language, such a name. Strictly speaking, we have no general ideas; we have tendencies to designate, and some names."103 "What we call a general idea, a view of the whole, is only a name. Not so the simple sound which vibrates in the air or disturbs our ears, or the col- [256] lection of letters which blacken the paper and strike our eyes, not even these letters perceived mentally or this sound pronounced mentally, but this sound or these letters endowed, when we perceive or imagine them, with a double property, the property of exciting in us the images of individuals which belong to a certain class, and of these individuals only, and the property of reviving every time only the individuals of this same class and only when an individual of this same class is presented in our memory or in our experience."104 Thus the name corresponds "to the common and distinguishing quality which constitutes the class and which separates it from others In this manner, the name is the mental representative of the quality and is the substitute of an experience which is forbidden to us."105 For, "we

can neither perceive nor preserve in isolation the general qualities in our mind We make [therefore] a detour; we associate a short event, particular and complex, to each abstract and general quality, a sound, a figure easy to imagine and reproduce;¹⁰⁶ we form the association so exactly and so rigorously that henceforth the quality cannot appear or fail to appear in the objects unless the name appears or fails to appear in our mind, and vice versa."¹⁰⁷ Hence, "when it is a question of a general quality of which we can neither have an experience nor a sensible representation, we substitute a name for the impossible representation and we substitute it with good reason. The name has the same affinities and the same repugnancies as the representation, the same hindrances and conditions of existence, the same extension and the same limits of appearance" ¹⁰⁸ "A general and abstract idea is [therefore] a name, only a name, the significative of and understood of a class of similar individuals, ordinarily accompanied by the sensible but vague [257] representation, of one of the facts or individuals."¹⁰⁹ "But this representation is not the general and abstract idea. It is only the accompaniment . . . my abstract idea is perfectly clear and determinate."¹¹⁰ That representation, on the contrary, is only "a residue of several dull and confused memories."¹¹¹

These selections from Taine's often tautologous exposition leave not the faintest doubt as to where he stands on the abstraction controversy. We have come upon a nominalist who goes farther than any other reputable representative of this view would nowadays be willing to go,

farther even than David Hume who, for all his affinity with Taine, yet never outrightly identified names with abstract or general ideas.

That went for Taine, the author of the book "De l'intelligence"; how it can be reconciled with the apparently quite contrary statements of the author of "Positivisme anglais" is not easy to see. Perhaps Taine changed his mind between 1864 and 1870. If he didn't, then it is not without a certain interest to watch the nominalist Taine in the earlier book controvert the alleged nominalism of the conceptualist J. St. Mill.

The purpose of this study was surely to make some contributions to the history of English nominalism, not to produce a history of it; but even the material presented will suffice to fend off the criticism that Hume's theory of abstraction is either in itself or in its effects something obsolete and that therefore a thorough examination of it is no longer justified. But even if there are no objections against an [258] examination in general, yet another objection to this study may seem justified. If the untenability of Hume's views on abstraction is the only issue, was there not a much shorter way to reach this end? Was it really necessary to go back to Locke; to attend to Berkeley in detail; to devote some time to discussing content and extension and their re-

lation without any regard to the historical facts? And regarding Hume himself, what point is there in specifying all the errors in his reasoning, where one would have sufficed to invalidate the result?

Had it been my only concern to refute Hume, I could indeed not answer all these questions. There are, however, two further aspects of this study, as was pointed out at the very beginning. Nor, given its monographic character, was it improper to introduce them. The two aspects are the factual and the historical, neither of which yields, from where I stand, to the other in importance. For the sake of the former, many things were included and expounded, especially in the sections of the work devoted chiefly to Berkeley, which require little further historical explanation. This was indeed the reason why the historical-critical method of presentation was for once completely discarded in the hope that some of the most important questions could in this way be decided more quickly. On the other hand, it was again the historical which compelled us to dwell on some passages of Berkeley, especially since we discovered that some erroneous views concerning his relation to Hume still prevail. And it is from this aspect above all that our strategy concerning Hume's hypothesis seems justified.

Hume, as is well known, later subjected his early work, the Treatise on the human nature, to a thorough revision. The author himself makes some statements which are quite unambiguous about the relation between the first and the second version. In spite of these, [259] there is as yet no clarity on this point. Since Hume did not

include in the second version some of the themes from the Treatise, any attempt to settle the question will have to do two things: On the one hand, two treatments of the same subject must be compared. On the other hand, the parts treated only once must also be examined in order to arrive by means of all these at an opinion as to what could have caused Hume subsequently to exclude matters of great importance from his consideration. This purpose requires accurate attention to the details. For one judges a piece of scholarship not only by the quality of its result, but also by the quality of the reflections and arguments by which it is reached. This was what motivated the author of this study to carry the criticism of Hume's theory of abstraction to such wearisome lengths. The abstraction chapter is, as it happens, one of those which were later discarded. Thus the author of this study has made it his task to contribute some material for the eventual solution of the question how the two are related to each other, at least with respect to the sections here dealt with. Only after all the other relevant sections of the Treatise will have been examined with equal detail, will it be possible to think of a definite disposition of the matter under discussion. And the historian of philosophy will do better, here as in many other cases, if he applies his efforts first to the preliminary labors instead of adopting an interpretation of the whole which, having no basis, cannot but be arbitrary.

One thing, however, can be said already, without prejudging the results of the further examinations. Also, it is only proper to stress

this one thing at the end of an essentially negative evaluation. Even [260] if Hume's own apparently negative later judgment of his early work were fully justified, this would not in the least detract from the respect with which the Scottish thinker has filled everyone who took the trouble to approach him. And it must indeed be a great mind which can through an early work, or even through a small and really quite mistaken part of it, exert as pervasive an influence on posterity as Hume did through his propositions about "abstract ideas".

+
F

1. Locke, An Essay Concerning Human Understanding, b. IV. ch. VIII. sect. 9.
2. A Treatise Concerning the Principles of Human Knowledge, Intro. sect. 10. Alciphron or the Minute Philosopher, dial. VII. sect. 6.
3. Treat., intro. sect. 13, expressed again in Min. Phil., loc. cit.
4. Treat., intro. sect. 14.
5. Ibid., sect. 15.
6. Ibid., sect. 12.
7. Min. Phil., loc. cit. sect. 7 (only in 1st and 2nd editions).
8. Essay, b. III. ch. III. sect. 6.
9. Treat., intro. sect. 11 and 18, Min. Phil., loc. cit. sect. 7 (only in 1st and 2nd editions).
10. Treat., intro. sect. 12.
11. This is the reason why I cannot accept a solution in this style which has been proposed by Kuno Fischer (Francis Bacon und seine Nachfolger, Second Edition, Leipzig 1875, p. 705). He states Berkeley's view as follows: "Words are signs of (not abstract, but, rather,) general ideas, which are themselves signs for a series of similar ideas." On the whole this corresponds to Hume's interpretation, whose inappropriateness will be demonstrated later. For the moment, I shall only say this: I could find no passage which would support K. Fischer's interpretation while everything quoted from Berkeley above appears to oppose it. Moreover, it would be most remarkable that Berkeley did not for his own purposes adopt Locke's definition of general words, which he quoted for polemical purpose (Treat., intro. sect. 11) if, given his concept of general ideas, it corresponded so completely to his intention, as would have to be the case according to K. Fischer.
12. Treat., intro. sect. 19, also Min. Phil., loc. cit.
13. Min. Phil., dial. VII. sect. 5.
14. Ibid., sects. 5-7.

15. Compare Treat., sect. 135, where Berkeley himself refers to the position in question.
16. Min. Phil., sect. 8.
17. Treat., intro. sect. 19.
18. Min. Phil., dial. VII. sect. 5.
19. Lectures on Metaphysics and Logic, ed. Mansel and Veitch, Edinburgh and London 1870, Vol. II. p. 284.
20. Treat., intro. sect. 22.
21. Ibid., sect. 16.
22. Comp. Ueberweg's Uebersetzung des Treat. (Berlin 1869, Vol. 12 of Kirchmann's Philos. Bibliothek), p. 109, fn. 5.
23. Comp. System of Logic, b. I, ch. 2, sect. 4.
24. In most definitions physical impossibility remains overlooked. But this is improper as we shall see. It would be insufficient to determine the individual concept as one "under which only one object is presented," for that is true also of each general concept in that it refers to a collective. If one says: "a man", one surely does not conceive several. But any man can be this one; therefore the concept is without question universal.
25. Drobisch (neue Darstellung der Logik, Third Edition, Leipzig 1863, sect. 19, pp. 21ff.) relates abstract and concrete as well as general and particular to genus and species, therefore using these names relatively. The objection against this is that such expressions as more general and less general, more abstract and less abstract would be clearer, while on the other hand, if one speaks this way, there would be no terms at all for the concepts we call individual and concrete.
26. Loc. cit., p. 23.
27. Analysis of the Phenomena of the Human Mind, ed. J. St. Mill, London 1878, vol. I. ch. VIII. p. 269f.
28. Logic, part I. Deduction, London 1870, p. 7, sect. 10.
29. Comp. eg., Hamilton, loc. cit., Lecture XXXIV, p. 298f.

30. Comp. Helmholtz, Handbuch der physiologischen Optik (Karsten's allgemeine Encyclopaedie der Physik, Vol. IX), Leipzig, Sect. 20. p. 273ff.
31. Mental and Moral Science, London 1875, p. 175.
32. Lectures, loc. cit., p. 287f.
33. An Examination of Sir William Hamilton's Philosophy, ch. XI, accessible to the author only in the French translation by Cazelles (Paris 1869) p. 216. [In English edition, Longmans, London, 1889, p. 229.]
34. Logic, b. I. ch. II, sect. 4.
35. Ibid., b. II, ch. II, sect. 4. footnote.
36. Loc. cit., sect. 26, p. 29f.
37. Ibid., p. 206ff. Logisch-mathematischer Anhang I.
38. System der Logik, Second Edition, Bonn 1865, sect. 54. p. 104.
39. Loc. cit., sect. 25, p. 28.
40. Essay Concerning Human Understanding, b. III, Ch. II, sect. 5.
41. Logic, b. I, ch. II, sect. I.
42. Comp. Hamilton, Lectures, vol. III, p. 171ff., where Berkeley is ignored. The peculiar misunderstanding (p. 183) of the expressions "synthetic" and "intuitive" which Leibnitz uses corresponding to the German "Begriff" and "Anschauung", has already been corrected by J. St. Mill (Examination, ch. XVII, in the French translation, p. 385, fn.). [English edition, p. 390.]
43. While in the introduction to the Treatise there is nothing concerning all this, there is very much about it in the Min. Phil. That makes it plausible to suppose that Berkeley has been more than is proper under the influence of his efforts, which here come out into the open, of vindicating the Trinity and other mysteries of the Christian religion.
44. Lect., vol. II., p. 305.
45. Francis Bacon, p. 703.

46. Loc. cit., p. 297.
47. Examination, (English edition), ch. XVII, p. 381.
48. Treatise, ed. L. A. Selby-Bigge, Oxford, 1958, b. I., p. I, sect. VII, p. 17.
49. Empirismus und Skepsis in David Hume's Philosophie, Berlin 1874, p. 123.
50. Treatise, loc. cit., p. 17.
51. F. Jodl (Leben und Philosophie David Hume's, Halle 1872, p. 123) reproduces Hume's view simply as Berkeley's but he failed on behalf of this claim to cite even only one passage from Berkeley.
52. Probably this is why Pfeleiderer errs when claiming (loc. cit., p. 122 last line) that Hume denied recognition or existence to general ideas, whereas Hume's attack, as Berkeley's, is only against abstracta. But perhaps this is merely only a minor inaccuracy in expression, as the end of the statement makes probable (in the middle of p. 125).
53. p. 189 in the footnote.
54. Loc. cit., sect. 21.
55. Treatise, b. I, part I, ch. VII, p. 18.
56. Ibid., pp. 18-19.
57. Ibid., p. 19, also b. I, p. III, sect. I, p. 72.
58. Ibid., p. 20.
59. Ibid., p. 22.
60. Ibid., p. 23.
61. Ibid., p. 23.
62. Ibid., p. 23.
63. Ibid., p. 23.
64. Ibid., p. 24.

65. "A great philosopher has . . . asserted, that all general ideas are nothing but particular ones . . . I shall here endeavour to confirm it by some arguments . . ." (p. 17)
66. Ibid., p. 18. "Quantity" here means nothing but size; greater and smaller are designated, in a rather unusual way, as degrees of size.
67. Analysis, vol. I, ch. III, p. 93.
68. These are the cases we mentioned above (p. 205ff.) as J. St. Mill's particular abstracta.
69. Hume ends the third argument with the claim: it is impossible to form an idea which has no determined degree of quality and quantity. "Abstract ideas," he continues, "are therefore in themselves individual . . ." (p. 20)
70. Treat., b. I, p. I, sect. I, pp. 1-2.
71. Ibid., p. 637.
72. Ibid., p. 19.
73. Ibid., p. 19.
74. Ibid., b. I, p. IV, sect. V, p. 235.
75. Ibid., b. I, p. I, sect. III, p. 10.
76. Ibid., p. 10.
77. Ibid., p. 637.
78. Ibid., b. I, p. I, p. 6.
79. This appears to be linguistically closest and therefore will be accepted in spite of the referred to response of the argument under consideration.
80. Hume's error is most poignantly expressed in the sentence which concludes this argument: "Now as 'tis impossible to form an idea of an object, that is possess of quantity and quality, and yet is possess of no precise degree either; it follows that there is an equal impossibility of forming an idea, that is not limited and confined in both these particulars." (p. 20) If 'that' in the protasis refers to 'object' as would be most natural to suppose,

then the proposition is true but is of no use to Hume; if, on the other hand, it refers to 'idea', then this fits in with Hume's view but is false.

81. Leben und Lehre David Hume, p. 33f.
82. Empirismus und Skeosis, p. 123ff.
83. This certainly is not beyond all doubt. The text reads: "that custom, which we have acquir'd by surveying them" (i.e., the individuals), but there was no mention of a 'surveying' before, only of an attaching of the same word to similar individuals.
84. Philological accuracy is naturally not our concern here.
85. This truly seems to be Green's opinion. Comp. Sect. 218 of the "General Introduction" to the Hume edition used by us (vol. I, p. 179f).
86. Loc. cit., p. 25.
87. Treat., loc. cit., p. 25.
88. Examination, loc. cit., p. 401.
89. p. 218ff.
90. Ch. XVII, loc. cit., p. 393.
91. p. 216.
92. Examination, loc., cit., p. 381.
93. Mental and Moral Science, b. II, ch. V, sect. 2, p. 176.
94. Ibid., sect. 3, p. 177 f.
95. Loc. cit., vol. I., p. 260.
96. Ibid., p. 262.
97. Ibid., p. 264.
98. Ibid., p. 265.
99. Ibid., p. 266.

100. Le positivisme anglais, étude sur Stuart Mill, Paris, 1864, p. 115.
101. Paris 1883, 2 vol.
102. Loc. cit., vol. I, p. 41.
103. Ibid., p. 42 f.
104. Ibid., p. 42 f.
105. Ibid., p. 43 f.
106. Do we therefore associate an idea which we have to something which we do not have?
107. Ibid., p. 44.
108. Ibid., p. 44 f.
109. Vol. II, p. 209. Compare also the following, chiefly only a repetition of what was already said in the first volume.
110. Vol. II, p. 260.
111. Ibid., p. 249.



Hume Studies

II.

The Theory of Relations



Part Two^{*}

Criticism and Development

I. First Principles

[608] 3. Mill's desire, very commendable as such, to stay in logic as far as possible away from the controversial metaphysical questions makes these claims even harder to grasp. In the doctrine of attributes, for instance, he talks of qualities and of sensations, and of grounding the former in the latter, etc., in a way that may well deceive anyone who does not read very carefully about the metaphysical point of view of the author. Yet, if one insists on a more accurate understanding

*Page numbers at the left margin refer to Wien Akademie der Wissen-
schaften 101 (1882).

and upon a closer examination, he will find in this impartiality, which is inevitably merely apparent, a not unimportant obstacle. Accustomed as one is to see idealistic metaphysicians speak the language of ordinary realism with some "mental reservations", this procedure of theirs remains confusing, even if they do not adopt it in the interest of the [609] idealistic position but for the purpose of eliminating metaphysical difficulties.

A clearly articulated idealism, on the other hand, would actually help with the first step of our investigation. It lies in the nature of this point of view that, fundamentally, it cannot offer anything but an analysis of psychic states; but these are investigations indispensable to those who believe that they can extend their knowledge beyond psychic states. There exists today hardly a serious difference of opinion over the fact that psychic phenomena are the only immediate data. Every circumspect realist will grant that. What he argues about with the idealist is only the use to which these data can be put. What the otherwise so different kinds of philosophical disciplines share and what impresses on them the unmistakable mark of their affinity is above all the role which the psychical phenomena play in them. Therefore, even if in ordinary life one speaks of relations between things as well as of their properties, without thereby intending anything presented or psychical, it is nevertheless also in this case normal to inquire into the psychical facts before proceeding to possible applications to the extra-mental world. Moreover, consideration

shows at first glance that in some of the most important cases of relations the conceiving subject, i.e., the subject to whom the relation is presented, is active in a quite characteristic way, so that in these cases the subjective factor comes even more to the fore than in conceiving the so-called absolute qualities. Indeed, asserting a relation appears in many cases to be completely independent of asserting the existence of the things it relates. Thinking of two different colors or shapes, I can call them similar or dissimilar even without knowing that there are such in reality or, even, knowing that they are not. Thus even the non-idealist will begin his investigation by focussing on the psychological [610] analysis of the relational phenomena and expect it to provide him with an answer to the question what is relation and what is foundation. Only then can it be decided whether and how one can also speak of relations between things. So we, too, shall for the time being not consider the latter question.

IV. Hume's Classes of Relations

[617] 1. What has been said about relation and foundation will allow us to approach critically Hume's views. Then the latter will carry us along. As to his definition of relation it now suffices to make explicit

why it fails. He mistakes the concept of the foundation for that of the relation. His classification, on the other hand, cannot be correctly evaluated without first examining it in greater detail. To this purpose we shall next analyze the several kinds Hume specifies, particularly with respect to their foundations. This assessment will without further effort yield an evaluation of the classification itself as a consequence.

The relations between degrees of a quality as well as the relations among quantities are the clearest and do not, at first glance, require special consideration. Their names themselves exclude all doubt about the nature of their foundations. It is true, though, that Hume counts as relations among quantities not only numerical ones but also magnitudes, and hence these are matters of geometry. If one considers this circumstance more closely, the apparent perspicuity of this class of relations is easily lost. But this feature will be sufficiently illuminated in the discussion of the other classes. Thus we shall not need to attend to it separately.

2. The space and time relations seem at first glance just [618] as simple. Here, too, the names themselves indicate the kinds of foundations, i.e., obviously, spatial and temporal data. Space and time, however, can be very different kinds and it is particularly necessary to be specific because in their case the part played by the above-mentioned view about the foundations of a relation is particularly important. Locke, we saw, who makes distance and succession the ground

of all these data, could not escape the relativity of all spatial and temporal determinations without any exception whatsoever. Hume did not object to this view, rather he identified himself with its substance, putting the main emphasis on "disposition" in the case of space and on "succession" in that of time.¹ One can probably say that this is one of those opinions which belongs to the tradition of the empiricist school in England, a point to which they still cling, even if only with some more or less essential modifications. Nor is this really rare on the continent. And it would seem that it is virtually taken for granted by all those who are preoccupied with problems of this sort.

That makes it all the more important to call attention to the above-mentioned impossibility of exclusively relative determinations. No one will pretend that he can compare two colors unless each of them is given to him by itself, i. e., unless he conceives them both absolutely. Equally, no one will be able to compare two extensions unless he is capable of conceiving each of them independently. In these cases, though, it may easily happen that both ideas depend on a common third, which may provide the illusion that one can avoid going back to some absolute content; and this illusion may well be the main source of the opinion which is here being opposed. For, indeed, nothing is simpler than to compare a line of 15 meters with one of 10 meters. But even if one ignores the [619] fact that what is being compared here are first of all two numbers, one cannot ignore the question what these two data, 15 meters long, 10 meters long, really mean. Each includes an equality relation; its

establishment may require some artificial aides; yet each of the latter must finally come down to some last determination. If one attends to this it becomes evident that it remains impossible to apply in any case the unit of measurement from which one starts, unless one has an absolute idea of the unit of measurement, as well as of the extension to be measured, on which to base a judgment of either agreement or disagreement in some sense.


The only remaining defense is that this idea of the last unit of measurement is nothing but a determination of the idea of juxtaposition, of the beginning and of the end point, and therefore itself relative. This objection requires some preliminary corrections which would lead us too far afield. Moreover, one sees that the alleged relativity is something completely different from what one usually has in mind when saying that statements about extension are relative. It is true, however, that the idea of juxtaposition is relative and therefore forces one to take one more step back to something which turns out to be really the last on which our determinations rest. This is the something by virtue of which a place in the continuum of a subjective space² is distinguished from every other place and which therefore can only be called a subjective space determination. This of course says nothing about objective places. It is correct that with respect to the latter relations, either among objects or among the latter and the conceiving subject, are of great importance. It is possible that with respect to objects we can give no other than relative place

[620] determinations, so that, say, in physics one could speak of motion and rest only in the sense of motion and rest relative to an object. All this, though, does not affect the claims here made, which concern only ideas and their contents.

Thus one can say: the place determinations given in the space continuum, which, just because they are parts of a continuum, must of course not be thought of as points, are the foundations of all spatial relations. The fact that spatial relations, such as those of distance, shape, etc., frequently occur without place determinations does not constitute a counter instance. That one speaks of the length of a meter is not grounded in the fact that the meter distance is something other than a relation of two place determinations to one another, but rather in the fact that in the continuum of space infinitely many pairs of points between which this distance obtains are possible. And there is also the fact that in case this distance coincides with, say, that between the extreme points of a rigid, movable body, it undergoes no change with the motion of this body, and that, therefore, the place in which it is at a certain time is accidental and as a rule practically unimportant. That obviously supports abstraction from the place data without, however, in any way eliminating their role as the foundation of the relation. Rather, this role is clearly illuminated by this so-called independence of the distance (and of the spatial relations derived from it) from the place. For this independence, paradoxical as that may sound, is the most re-

liable sign that in fact the place does not depend on the distance but, rather, the distance on the place. If A and B are two place determinations, g their distance, then it is clear that g is independent of A and B in the sense that the distance g can also obtain between infinitely many other place determinations. If, therefore, only g is given, neither A nor B need be involved. If, on the other hand, A and B are given, no other distance than g is possible and this distance can expand or contract only if either a different A_1 or B_1 step in for either A or B . Hence, it is not [621] g that determines A and B ; rather, A and B determine g . Or, in general: it is possible for equal relations to obtain among different pairs of foundations; but it is impossible for unequal relations³ to obtain among the same or respectively equal pairs of foundations. Consequently, the place determinations are the foundations of the distance relations and not conversely.⁴

So far we have dealt exclusively with spatial relations; but it is easily seen that the case of the temporal relations is analogous. In comparison with the doctrine of spatial ideas, that of temporal ones has hitherto remained a rather neglected chapter of psychology, nor of course is this the place to discuss it. Yet the analogy between spatial and temporal ideas has so far proved so comprehensive that it creates a favorable presumption for any view which extends it further. It is certain that a subjective temporal continuum, in whatever it may have been constituted, surely corresponds to the subjective spatial continuum; and just as the latter remains unchanged when the subject, which, as it



were, carries its subjective space with it, changes its position in objective space,⁵ so it can also be said of subjective time that the flow of objective time cannot change it in anything perceptible. The present is for me today what it was yesterday and years ago, and will perhaps be years later, and the same goes for the more remote past and future. That what is at first in the present or future is later in the present or past, is no more a change of subjective time than it can be called a change of subjective space when an object that has first been sensed rather far to the left comes to stand to the right because the subject has perhaps [622] turned its head to the left. And just as spatial relations can be traced back to place determinations, so temporal relations must be reducible to temporal determinations as their last data. One who wants to ground all other temporal phenomenon in succession would therefore once again make the mistake of grounding them on a relation while at the same time he deprives it of its foundations.

3. While the classes of relations so far considered are determined and circumscribed by the nature of the foundation, that of similarity, on the other hand, is not tied to any particular kind of foundations. Aside from the case, mentioned later, in which whole complexes of attributes serve as foundations (as in speaking of the similarity between two men even though different contents may be involved), the idiom does favor the application of the word "similarity" to the sensory

qualities so-called. Yet one speaks just as naturally of similarity among shapes. Nor does anything but custom keep us from speaking of similarity also in the case of size. This would be contrary to the geometrical linguistic habits; but, then, the geometrical concept is just one (mathematically justified) specification of the meaning with which the word is in fact used outside of mathematics. Nor is this a proposal to extend the ordinary usage but merely an attempt to keep the latter from causing the nature of the relation in question to be misunderstood. But an attempt at definition would here be of much less help than an obvious example.

One does not hesitate to speak of the similarity of different shades of the same color nor of that between colors considered to be different; specifically, one finds this similarity to be the greater the closer the two colors compared are in those artificial order [623] arrangements called color lines, surfaces, and bodies, respectively, depending on whether one believes the best arrangement to be one-, two-, or three-dimensional. It would of course be erroneous to believe that these arrangements provide a means for defining or explaining the similarity relation. To say that more or less similarity means nothing but more or less proximity in the color continuum would therefore be incorrect since, rather, more or less proximity in the color continuum cannot mean anything but more or less similarity. For what would otherwise be the principle by which the several colors are arranged? Even if the connection of the discrete

data into a continuum is not exclusively the result of an ordering activity, it is yet clear that no arrangement can be made before the nearest available discreta are grouped and thereby ordered in the imagination. To identify similarity in general with proximity in a quality continuum is of course even more improper. For there is similarity among the ideas of taste and of smell, even though no real continua have been achieved in the domain of these senses. (This, though, has its ground not in the nature of things but, rather, in the circumstance that our intellectual development seems to divert us from these qualities so that attention and imagination, as they become more efficient by virtue of exercise, turn more and more away from them.) While one can thus not say that where there is similarity, there must be a quality continuum, the converse is certain: where the differentiations of a content can be arranged in a continuum, there is also the essence of a similarity. This being the case, nothing stands in the way of applying the term similarity to space and time, primarily thus that absolute space and time determinations are the more similar the closer they are to one another. The same goes for the differences in musical pitch. (If one sometimes says that the octave is more similar to the key note than the second, one [624] obviously thinks of something other than pitch.) Again, the same goes for the number series which is of course discontinuous by nature, even though the analogy to the cases just considered is guaranteed by the mere possibility of the fiction of a number line.

One will adduce against this view our linguistic sensibilities which clearly resist the application of the word "similarity" to spatial or temporal determinations. Language, though, while preparing the way for scientific classification, yet notoriously often requires amendment, since it happens frequently that the same thing has different names as it appears in different forms or perhaps only in different contexts, whereby a general term is kept from being used in a part of the domain to which it can lay claim. One "beats" the kettle-drum or the tympanum, but does not "play" them, although they appear no doubt as musical instruments in a score and although what is shared by the handling of violins, flutes, harps and organs and is in the case of these instruments called "playing" is surely also to be found in the case of the kettle-drum. Similarly, it would seem, it goes with space and time: one does not speak of more or less similarity of space and time determinations because the shorter expressions "nearer and farther" are used instead. For the rest, I repeat, my concern here is not proposals of linguistic reform but merely to call attention to what seems to me important, namely, that the relation of similarity is not restricted to any one class of qualities but is not less involved with space and time than with all sensory qualities, even though it is not always identified by name.

Hume's view agrees with this result more in appearance than in reality. His claim that all relations involve similarity implies indeed its being involved in all possible foundations. But for spatial

data he does not mean by this that there are more or less similar spatial determinations, but merely that whatever is to serve as the foundation of a spatial relation must be similar to it in being itself spatial. Therefore, [625] similarity would upon his view not only be accessible to all kinds of foundations but also be required for all kinds of relations, which could not without artificiality be held of causality and contrariety, and, even worse, would reveal itself to be completely untenable in the case of difference. So I shall return to this point when considering the latter.

4. From what he says, there is no doubt about the foundation of the relation Hume calls contrariety. It is the existence and non-existence of one and the same object: Occasionally Hume says explicitly that, strictly speaking, nothing else can be called contrary.⁶ All the more doubtful it is whether the relation which these foundations yield has the same status as those so far considered. Existence and non-existence, Hume says, destroy each other and are perfectly incompatible.⁷ Locke, in his doctrine of knowing, had already spoken of the incompatibility in the list of the most important relations. Can one say that establishing that the existence and non-existence of a thing are compatible is the result of comparing these two ideas? The answer one will find without hesitating is negative. The comparing of two such contents may yield their differences or perhaps, as Hume himself mentions, their similarity, but to assert their compatibility or incom-

patibility is something completely different. We do understand that such a claim depends on the two contents, and to this extent calling them foundations seems justified, yet we are not faced with a comparison of these foundations. Rather, we have come upon the first case where the definition of relations which Locke gave and Hume accepted no longer suffices.

[626] 5. Attempting to find the foundations for the two classes of causality and of identity, we encounter in both insurmountable difficulties. To begin with the former, causality, if Hume's analysis is correct, spatial contiguity⁸ and, unquestionably, succession⁹ are required. Yet, as has been mentioned before, the contents have nothing to do with the psychic compulsion which according to Hume is essential to it. They thus cannot be called foundations of this relation. Nor of course are they being compared. So we are still further away from the concept of relation with which we have so far worked than in the last case. Nor would a theory of causality different from Hume's in this respect lead to a different result.

Virtually the same goes for identity, which for Hume includes not only equality of contents but more or less, in the manner in which, as found, Locke as a rule uses this word. Even in the case which Hume calls sensual perception of identity (probably he means the identity of a thing which is throughout some time interval given in sensation, perhaps at its beginning and its end, or at two other moments of it), we

have also, when staying with the psychically given, not only the equality of two things but the continuous transition of them into one another as an essential constituent of it. Moreover, Hume is most inaccurate when holding that this case should be classed with those in which two simultaneous objects are being compared.¹⁰ Surely only one object is present; the comparison which takes place is between two contents one of which is sensuously present while the other is merely remembered, i.e., two contents which, even though otherwise completely equal, are yet in any case temporally different. This shows that even in the case of the [627] simplest identity claims of this kind, mere comparison of contents does not suffice. Rather, memory must be resorted to. Memory must vouch for the actual existence of some state of affairs at some time (no matter whether of the more recent or the more distant past) as well as for the continuity of the transition between the two points in time. Memory, however, does not as such ground judgments about relations but rather a judgment about existence. If this circumstance (which, by the way, as we shall see, also enters in causality) is considered, then identity becomes something entirely different from all the kinds of relations so far considered and does not exhibit anything one could call a foundation in the sense in which we have so far used the word.

6. Let us finally turn to difference. Hume thought that it ought not be counted as a kind of relation, since it is not really a

relation but rather the denial of one, either of similarity or identity. Whether this is correct in the latter case, of so-called numerical diversity, we need not decide. But it must be stressed that Hume's view of the former does not stand up under close examination. Even to contrast diversity with similarity is incorrect. Two things can well be similar and yet at the same time different from one another (not merely numerically, but also qualitatively). Indeed, they always are. Otherwise we would call them equal and not similar. But even if one takes "different" to be synonymous with "dissimilar", a term whose negative meaning is manifest, there remains the fact that the psychic process which takes place when one establishes the dissimilarity or difference of two qualities such as, say, "blue" and "sweet", is not the denial of the similarity relation between these two contents. Just consider what complication that would be. I cannot deny similarity to blue, nor to sweet, but only to both; this can only mean that I compare blue and sweet and that the result of this comparing is such that I must deny [628] its being similarity. Introspection does not provide the least evidence of this complication nor, for that matter, of negation. The perceiving of the similarity in the one case and of dissimilarity or diversity in the other are two processes of the same kind, equally simple, neither of which can be reduced to the other. So one must recognize that difference is as much of a relation as is similarity.

If once this is established, it is now completely clear what to make of the role Hume gives to similarity as a condition for all

other relations. What he thus expresses is indeed a popular opinion. One says often: the two things A and B are so different that one cannot compare them. What one forgets is that in order to be able to say that, A and B must already have been compared; or, rather, one uses the word "compare" in a narrower sense, calling comparable only what is worth comparing, such as, e.g., what exhibits a noteworthy similarity or contrast. With this use of the word a Beethoven symphony can indeed not be compared with a head of cabbage. Psychological reflection must nevertheless insist that these things are in fact comparable even though the difference brought out by the comparison is very great.

7. The insight gained into Hume's several classes of relations should suffice to answer the question whether his classification has scientific value. Classifications, even though primarily catering to formal needs only, often imply a whole complex of claims about the things classified, so that accepting or rejecting a classification may easily amount to accepting or rejecting a whole theory.

The main task is to uncover the ground whose determinations [629] yield the seven coordinated classes. As long as one stays with Locke's definition, by which all relations are cases of comparing, there are strictly only two possible grounds for a classification: either the nature of the foundations being compared, or the result of the comparing. The latter is of course determined by any two determinate foundations although it may and does differ for different

foundations (e.g., different colors) of the same class. The latter feature Hume nowhere takes into account. That the first guides him, at least for some classes, there is no doubt. The relations of space, time, quantity and quality obviously derive their differences from the diversity of the contents compared. But if this were the only ground of the classification, then foundations of the same nature could not possibly appear in more than one of the seven classes. Yet Hume claims expressly that, since all relations presuppose similarity, none of them, except perhaps similarity itself, ever occurs alone. Furthermore, can one not predicate constancy of a determinate degree of a quality through a determinate time and does not, therefore, the relation of identity presuppose a relation among qualities? Again, if it is true that, contrary to what Hume thinks, difference is a relation, is it not one that can obtain between cause and effect just as well as between existence and non-existence, which are the foundations of the relation of contrast?

But our reflections have already led us to an objection which lies deeper. We were forced to exclude the relations of identity, causality and contrariety from those grounded in comparing; that makes it immediately dubious whether what for these three relations takes the place of comparing is in all three cases one and the same. The relation of these several relations to one another will have to be determined [630] by further investigations. But what has been said already makes it plausible, not to say evident, that they involve grounds of comparison of a kind such that the four cases of the relations of comparison

appear, with respect to them, not as four independent kinds, but, at most, as four coordinate kinds of a single one (the relation of comparison).

But let us for the time being stay with the last-mentioned class for which the nature of the foundations may well yield a ground of classification. According to what was just said, this would only be possible if similarity were superordinated to the other three kinds. But then a new difficulty appears. The disjunction: quantity, degree of quality, space and time, is incomplete. For the qualities themselves may be compared irrespective of their degree. Nor do the three members of the given disjunction really exclude each other. At the very least, quantity and determinations of space and time will soon clash. Besides, one may question whether similarity is the only relation superordinated to the others. For we discovered that diversity or, respectively, dissimilarity, is also a relation; and of equality not even a word is breathed in Hume's classification. Perhaps he thinks of the latter as a special case of similarity as, more recently, did J. St. Mill.¹¹ We, though, shall see that in many cases similarity is rather a special case of equality.

Enough has been said to show that Hume's classification is untenable. But it will be best if, before trying to correct Hume's error, we glance quickly at other classifications which have been produced either by Hume's school or at least (not to prejudge the open question of his influence) by thinkers intellectually akin to him.

IV. The Relations of Comparison

[646] 1. We now must attempt to bring the various cases of relations under a general point of view in a satisfactory way. For this purpose it is advisable to begin with the simplest; we there-
 [647] fore consider first the relations most familiar to us from what has been said so far, namely, those produced by comparing. Again, the comparison of the simplest possible attributes should first be considered.

The comparison of two attributes, however these might be constituted, can only lead to one of two results: on the one hand, equality; on the other, inequality or difference; the completeness of this disjunction is unquestionable. Equal attributes are often, though inaccurately, called identical; later we shall see that complete agreement or equality is necessary but not sufficient for identity in the strictest sense.

Since there cannot be a third in addition to equality and difference, there is of course no such thing as the coordinate position which one usually grants to similarity. Many investigators seem to hold (we saw this in the case of J. St. Mill¹²) that the correct disjunction is between similarity and difference, equality being only a special case of similarity. There is, however, a fluid boundary between similar and dissimilar, the latter of which would in this case have to coincide with different, but not between equal and unequal;¹³ it would therefore be

unnatural to put the cases of equality and some cases of inequality under the heading of similarity while putting the remaining cases of inequality [648] under the heading of difference. Furthermore, it is difficult to conceive how the concept of equality could be produced by determining the concept of similarity. Finally, this division runs head on against linguistic usage; for something which is equal will not easily be called similar; on the contrary, by calling something similar one asserts, for the most part quite consciously, that there is also a difference.

The misunderstanding may have been facilitated by the fact that what one calls similarity as a rule turns out to be a partial agreement, i.e., an equality of a part of the elements. Bright red and dark red and green also can pass for similar, for both are colors, etc. And that makes it plausible to regard equality as a case of extreme similarity, similarity as one of imperfect equality. But on a closer examination this appearance is only the result of an inaccurate expression. Strictly speaking, there is in equality no degree of perfection. What is equal is perfectly equal and what is not perfectly equal is not equal at all. Two complexes can be called equal only if all constituents are equal; if they are not all equal, then the complexes are unequal, irrespective of whether the number of unequal elements is large or small. On the other hand, there are degrees of similarity just as indubitably as a variable x can increase; but the former is as incapable of reaching equality as the function $\frac{a}{x}$ is of reaching zero. And it is just as mistaken to make equality into a case of similarity.

If anything, these considerations suggest the reduction of similarity to equality, even though in a sense completely different from the one just mentioned. For what we saw in the examples of red and green, of bright red and dark red, is so far from being an exception that one might well raise the question whether perhaps not all cases of similarity ought to be analyzed in this way. Every act of abstraction presupposes a plurality of elements in the content presented to it; every act of determination must produce such a plurality. [649] It follows that what Locke and Hume call simple ideas does not merit this name, at least not in the sense of being ideas whose content is a single element. On the other hand, though, the connection between abstraction and similarity has been emphasized too much rather than too little in psychology. Yet, different determinations of one and the same content may correctly be called similar, this claim being chiefly grounded on what can be equally well abstracted from either. The more constituents that agree, the fewer that don't agree, the greater the similarity. From this one immediately concludes that this way of looking at the matter can certainly be applied very widely. The question is only whether it covers all cases of comparison of qualities. This question, it seems, depends on the answer to another, namely, whether, in case the coordinate determinations of a single content form a continuum, the number of its components either can or may become infinite. How one is forced to something of this sort is easily seen. If in the case of blue and red we accept one (or several) common

elements corresponding to the word color, then one can do the same with the different shades of blue, all of which have in common that they are blue. Similarly, one establishes several gradations within the different shades, then gradations within these gradations, and so on, ad infinitum; all these being divisions neither more nor less arbitrary than the distinctions of the traditional classes of red, blue, green, and so on, the transitions between which are equally continuous. Each of these divisions would entail the supposition of common determining elements. That shows that an eventually infinite complication could not be avoided. If one accepts it, then we can to all cases in which it is possible to speak of continua of qualities apply the principle that similarity is partial agreement.

[650] It is not here our task to explore the implications of this infinite complication of a phenomenon apparently so simple. But let me recall an argument of Hume's which he adduces, in defence, primarily of his theory of abstraction, but perhaps also of the theory of simple ideas, and which, if it stood up, would from the very beginning make it impossible to proceed as we tried. In order to prove that there can be similarity without agreement in a common determination, Hume later calls attention to the class of simple ideas which the view he opposes could infect with a contradiction. All simple ideas, he claims, are similar to one another in being all simple; and this very simplicity excludes any composition, hence also the existence of any determination in which they could all agree.¹⁴ Here, though, one sees easily, we are faced with a confusion between an idea and its object. By a simple idea one can only mean one whose object is simple, but not one which has the at-

tribute simplicity. A simple idea is not the idea of simple. Supposing, as Hume does, that blue is a simple idea, it would no more have the attribute simple than the attribute idea. It is one thing to conceive an object, quite another thing to conceive the conceiving which has that object as its object. It is not the same to think of a centaur and of the idea of centaur. To the latter psychological way of looking at things belongs the characterization of an idea as simple; yet, as shown by the juxtaposition of two words of different meaning, the idea 'simple idea' is not itself a simple idea. The contradiction on which Hume insists is therefore not really there.

Even so, if one does feel compelled to reject the supposition of infinitely many determinations, then the only way out is to suppose [651] that the term similar has two rather different meanings. On the other hand, what has been said about the partial agreement among elements remains valid wherever one does in fact encounter such agreement. If, on the other hand, one comes upon similarities supposedly within a continuum of qualities, one will not need to consider it an exception from this principle, since in these cases the agreement in all determinations common to all of the continuum is immediate. Yet one will have to recognize still another principle by virtue of which the contents closer to one another in the continuum are more similar than those more distant, even though, as mentioned above (p. 204), this principle cannot be adequately defined as proximity in the continuum.

This much, however, remains: similarity is always a special case of difference. For even if partial agreement or equality were

2. I believe to have established the division of all relations of comparison into equality and diversity, and of the latter into similarity and dissimilarity.¹⁵ This classification pays no attention to peculiarities of the contents compared, i.e., of the foundations. For the range of these relations is in no way limited by the peculiar nature of their foundations. The application of the terms equal and different is undoubtedly justified by linguistic usage, whatever the attributes compared may be. One speaks of the equality and of the difference of either color or tone, and so on, but also of place, time, size, shape, and such; there are not two attributes that could not be compared.

With respect to similarity and dissimilarity I do not have linguistic usage on my side. It has already been pointed out that one usually applies these terms only to the so-called sensory qualities and to shape. But perhaps it is clear already that this does not suffice for excluding those relations. It is therefore a misunderstanding of the true state of affairs if one claims that similarity and the relations of space and time are coordinate.

[653] But the last remark must not be taken to mean that all space and time relations, also insofar as they are cases of diversity, are all further determinations of either similarity or dissimilarity. Rather, it seems to be a fundamental reason for the limited application of these terms that the nature of some classes of foundations allows a determination of the relation more precisely than can be achieved by the two designations, similar and dissimilar, which are pretty vague after all.

Thus one speaks of the similarity of noises, or perhaps of timbre, but not of pitch. This is even clearer in the case of space. The homogeneity of the space continuum in all of its parts, the possibility and recognizability of equal distances in the case of different places, etc., allows for the very different and completely distinct cases of inequality which one has in mind when speaking of the measurability of spatial distances. If instead of an isolated space determination, whole complexes or, more accurately, continua of place determinations serve as foundation, then new and distinct forms of inequality appear. The inequality in the direction of two lines is precisely expressed in the size of the angle they form; equality of a single place determination with inequality of all others characterizes the relation of two lines of which one usually says that they either touch or intersect; new determinations result with figures, surfaces, bodies, where, to be sure, the complication increases without, however, affecting what primarily concerns us. Simple but otherwise analogous is the case of temporal determinations and of number. The complexity is brought about always by the inclusion of ever more complicated data in the foundation, whereby it becomes particularly important that one can so include not only absolute but also relative determinations, which latter, as we saw and as will be pointed out again, can also occur independently and, above all, serve to give the mathematical reflection of that generality which so markedly distinguishes it and which may make one forget that the ground on which it all rests is nothing but the contingent determinations of place and number from which,

[654] once fully developed, they seem so remote. Characteristically the term similarity reappears in the spatial area (aside, of course, from geometrical terminology) more frequently, or even with special frequency, where it is not feasible to make the relation more precise, in comparing complicated shapes. One speaks of the similarity of man, of regions, and so on, and is usually unable to specify in what, as one says, this similarity consists. The same goes for complexes of auditory sensations which one compares as motives or melodies, and so on.

I cannot here unpack all these hints about so many areas. Yet I believe to have shown that equality and diversity and, in the case of the latter, similarity and dissimilarity, are relations which, under favorable circumstances, must be the result of every comparison of attributes, no matter what the latter be. And also I believe to have shown that all other relations of comparison are kinds of equality and inequality determined by the special natures, or perhaps complications, of the ideas which serve as their foundations. The enumeration of these ideas, if at all possible, would be of interest for the psychological analysis of some contents, but it would hardly yield further information about the nature of the relations of comparison as such.

3. So far we discussed chiefly the comparing of a single attribute. Yet it has already been mentioned that one can also compare complexes of attributes. The most important case of this kind is the one where substances are compared with one another. I here use the word

substance without any metaphysical presupposition in order to designate what is called the thing in contradistinction to its properties. Whether Locke and the many other opponents of an idea of substance toto genere different from that of inherence are right or wrong we cannot consider. For surely there is nothing to compare in substances except their properties; for our next purpose therefore it will suffice to look at the [655] concept of substance as no more than a complication of attributes.

In the theory of comparison the introduction of substances produces little that is new. For to compare substances is only to compare them with respect to their attributes, which thus remain the foundations of the relations. If one says that one piece of sugar is sweeter than another, then one has compared gustatory sensations; if one says that one piece of cloth is brighter than another, it is a matter of a relation between colors. One might suspect that there is an exception in those cases where the whole complex is compared to another, as, e.g., when one finds that two people are similar, when one thinks not just of their external appearance but includes their whole way of behaving. Yet even in this case what are compared are the single determinations. What distinguishes the case is merely that one adds, as it were, the several results, calling the object considered similar or dissimilar depending on whether the similarity or the dissimilarity prevails.

4. What has been said shows that, strictly speaking, Hobbes is quite right when he believes that one cannot correctly predicate of a substance the result of its comparison with another as a further attribute. Presented with a red sphere, one cannot make a further property of it out of its being different from a blue sphere; for this property is but the result of comparing it with a blue globe, by which comparison nothing in the red sphere has been changed. The sphere just has its color as well as some other properties; these may offer occasions for countless comparisons, but the number of properties of the sphere cannot thereby be increased.

This completely obvious fact in itself deserves mention because the appearance of such an increase may easily arise from the fact that with the number of comparisons made the number of names of attributive [656] expressions (simple or complex) applicable to each of the objects compared increases. The expression "different from blue" is just as good an adjective as is the word red; the one functions grammatically as does the other, and it may happen that the speaker is more interested in the difference than in the redness. Perhaps a yellow or green sphere would be as welcome as the red one, provided only that it is not blue. That makes it important to insist that red and different are not really the same sort of thing. The sphere is red and nothing else, no matter with which color its color is compared. Nor can ever a new attribute be predicated of the sphere on the basis of such a comparison.

The issue here before us and already touched upon earlier is

that of the so-called relative attributes and of those words which, as it was put, designate the relation from the point of view of one of the things compared. The verbally different correlatives, such as larger and smaller, more and less, and so on, where a pair always refers to a single instance of a relation, show this most clearly. Yet it is exactly the same with verbally equal correlatives such as similar and similar, while for the relation itself the only word available is almost always derived from the correlative adjective (e.g., similarity, equality). This indicates a practical need which such relative determinations serve. And one finds indeed, aside from the importance of the comparison of known foundations, relative determinations often provide information about absolute data which are unknown.

Suppose that someone, wanting to describe a man x whom he knows, happens to say: he is as tall as I am, has chestnut brown hair, and so on. The speaker here asserts a relation between the height of x and his own. Both foundations are known to him, thus the comparison could proceed normally. But the psychical state of the hearer, who does not know x, is different. He knows the height of the speaker. He is confronted with a relative datum, and he is in a position to construct, as it were, the other foundation out of the one given to him and out of the relation. Something similar happens when he hears of the chestnut brown hair of x: he knows the color of chestnuts and thereby determines the color of x's hair. That the given foundation in the second case is general, while in the first it is individual,

makes no difference. If I look at a cast of the Laocoön group or a copy of a Carlo Dolce as a cast or as a copy, my only purpose is to replace a foundation of a relation of equality or similarity, which is inaccessible to me, by another, which is given. As is easily seen, not all cases of comparison are equally useful. A photograph would have accomplished less than either a copy or a cast, since it is further away from the original and since similarity determines the absent foundation much less accurately than equality. If on the other hand one could describe an object only as markedly dissimilar to another, this datum would surely not be very helpful: The hearer can form no intuitive idea of the thing thus described, or at least none of which one could claim that it is to some extent adequate. For the rest, one sees easily that not only relations of equality but also many relations of difference are capable of determining accurately unknown foundations. This is most strikingly shown in the relative place data and what is connected with them.

However precise or imprecise such relative determinations may be, they all have one thing in common. Their main function consists in more or less accurately determining a previously unknown attribute of which alone it can be properly said that it belongs to a substance. Every relative datum of this sort can therefore also be characterized as a method of indirectly conceiving an attribute. In contrast to this, an attribute which is merely the content of a sensation or of a phantasm is yet directly conceived. We have just dealt with cases in which the

indirect conception of an attribute may enable the imagination to con-
 [658] ceive it directly. At times the formation of the direct idea out
 of an indirect one may even produce the appearance that we can in imagi-
 nation also conceive sensory qualities which do not go back to any
 sensation.¹⁶ An attempt to establish the law of this process would here
 lead too far. But let me add one remark. Even if there is the capacity
 to transform indirect data into direct ones, the transformation yet need
 not occur. It seems, here as in many other cases, that psychical opera-
 tions are like mathematical cases in that one can for a long time "indi-
 cate" them without carrying them out.

If an indirect datum of this kind is to be understood, then it
 must be possible to conceive relations even if no foundations are given;
 not as if one could conceive relations which lack foundations, but in
 the sense that equality and inequality must be conceivable without an
 explicit determination of the equal or unequal attributes. As already
 mentioned, this is nothing but a simple case of abstraction. And here,
 too, as usually elsewhere, abstraction brings about universality.
 Equality as well as inequality can obtain between very different pairs
 of foundations. In the above-mentioned cases of indirect qualitative
 determination an abstract idea of a relation, applied to a known founda-
 tion, determines one which is unknown. But there are also cases where
 the idea of the relation alone must suffice to bring about the indirect
 conceiving of two attributes of which one knows nothing except that they
 stand to each other in this relation and inhere in a more or less deter-

minately given substance. One can know that two men are neighbors even if one does not know where they live, just as one may know that they were contemporaries without knowing when they lived, and so on. As a rule this will happen where the relation is the main item, while the foundations between which the relation obtains remains in the background; [659] and the generality thus achieved is the reason for the decisive importance of such conceptions in scientific thought. We have already in another context mentioned the possibility, associated by such relations without foundation, of connecting with each other foundations which are given to us only in their relation to a third foundation which is itself unknown. The principle that two quantities which are equal to a third must also be equal to each other is but the general formulation of such a case. One sees at a glance why the whole of mathematics, since its concern is with the highest possible generality, independently of all particular determinations of place and magnitude, deals primarily with cases of this kind, which one may not inappropriately call the mediation by relations, since what is characteristic of them is that each pair of relations considered has one common foundation. Naturally, though, this communality does not as such suffice for a mediation. If we had only the two relations of a being different from b and b being different from c, we could not, if we knew nothing else, arrive at a relation between a and c.

It is also obvious that indirect data of the kind indicated, i.e., those which lack both foundations, do not suffice to produce direct data.

without ideas.

All this is of importance for the abstraction problem in so far as Berkeley believes that the misapprehension of these facts is the motive for erroneously supposing that there are abstract concepts. If we suppose: "that every significant name stands for an idea . . . and it being withal certain, that names, which yet are not thought altogether insignificant, do not always mark out particular conceivable ideas, it is straightway concluded that they stand for abstract notions."¹⁷ The theory presented thus not only rejects a self-contradictory doctrine, not only replaces the untenable with a new one, but also points at the source of the old error which has been so disastrous for all philosophy.

[192] Let us now cast a critical glance at the statements of the Bishop of Cloyne which we have here reproduced as concisely as possible. The first thing to be stressed concerning his relation to Locke is that the dilemma that has to be used on the definitions which do not agree with reality also has to be used on Locke's characterization of abstraction: either the definition is correct, then the entity described cannot in fact exist; or the definition is false, in which case the entity in question can still exist, though naturally only with characteristics partly other than those attributed to it by this definition. Berkeley now committed the fundamental error of considering only one horn of this dilemma. There are few today who would not agree with his polemic against Locke's statement of abstraction. But, even if everyone must concede that in most cases the "separating" of metaphy-

1. E.g., Treat. B. I. p. II. sect. III. p. 33ff.
2. I say "of a" because I do not think that I thereby prejudge any theory of space. For their viability seems to me independent of however one conceives the genesis of spatial ideas and, in particular, the connection between visual and tactual space.
3. Of the same class of relations, as must be added in view of what will be seen later.
4. Comp. Stumpf, Ueber den psychologischen Ursprung der Raumvorstellung, Leipzig 1873, p. 280f.
5. I permit myself for brevity's sake this metaphysical expression even though it may require explication, since it can hardly be misunderstood.
6. Treat., B. I. p. III. sect. XV. p. 173.
7. Ibid., sect. I. p. 70.
8. Ibid., B. I. p. III, sect. II. p. 75.
9. Ibid., p. 76.
10. Ibid., p. 76.
11. System of Logic, B. I. ch. III. sect. II. p. 46.
12. See above, p. 213.
13. On the other hand, in connection with the difficulties stressed by Kant, one cannot assert that in the case of some ideas, one will no less hesitate to call them equal than unequal. For the fluid concepts are not characterized by there being an area between them to which neither applies, but rather by there being one which apparently permits the application of both. There are colors which I could just as well call red as orange, but there are not two contents which I would be inclined to call equal as well as unequal. That occasionally I can in fact assert neither equality nor inequality may be due to two things: (1) the foundations making it for some reason difficult or impossible to perceive the ground of the relation, (2) it being a matter of some existent outside of myself, which I am to judge by my ideas, when I mistrust the accuracy of my sense data and there-

Bibliography

1. Bergmann, Gustav, "The Problem of Relations in Classical Psychology", Philosophical Quarterly 7 (1952). Also reprinted in The Metaphysics of Logical Positivism, Longmans, Green and Co., New York, 1954.
2. Berkeley, George, A Treatise Concerning the Principles of Human Knowledge, in The Works of George Berkeley, Bishop of Cloyne, 9 vols., ed. by A. A. Luce and T. E. Jessop, Thomas Nelson and Sons, Ltd., London, 1950.
3. Findlay, J. N., Meinong's Theory of Objects and Values, Second Edition, Oxford, London, 1963.
4. Grossmann, Reinhardt, The Structure of Mind, University of Wisconsin Press, Madison, 1965.
5. Hamilton, William, Lectures on Metaphysics and Logic, 3 vols., William Blackwood and Sons, Edinburgh, 1859.
6. Hicks, G. Dawes, "The Philosophical Researches of Meinong (I.)", Mind 31 (1922).
7. Hume, David, A Treatise of Human Nature, ed. L. A. Selby-Bigge, Oxford, London, 1958.
8. Locke, John, An Essay Concerning Human Understanding, 2 vols., Dover Publications, Inc., New York, 1959.
9. Meinong, Alexius, Hume-Studien I. Zur Geschichte und Kritik des modernen Nominalismus. II. Zur Relationstheorie, Academie der Wissenschaften, Wien, 87 (1877); 101 (1882).
10. _____, "Modern Nominalism", Mind 4 (1879).
11. _____, "Ueber Gegenstände höherer Ordnung und deren Verhältnis zur inneren Wahrnehmung", in Gesammelte Abhandlungen, Vol. II, Leipzig, 1913-1914.
12. Mill, James, Analysis of the Phenomena of the Human Mind, ed. J. S. Mill, London, 1878.

fore do not venture a judgment.

14. App. to Treat. p. 637.
15. Linguistic usage is rather uncertain; one could also say equality and inequality, similarity and diversity, or use diversity in a narrower or wider sense.
16. Compare Hum Studies I., p. 152.

13. Mill, John Stuart, A System of Logic, Longmans, 1961.
14. Ockham, Philosophical Writings, ed. and trans. by Philotheus Boehner, O.F.M., Nelson, Edinburgh, 1959.
15. Robertson, George Croom, "Critical Notice of Hume-Studien I", Mind 3 (1878).
16. Weinberg, Julius R., Abstraction, Relation and Induction, University of Wisconsin Press, Madison, 1965.