...what goes by the name of the association of images is in reality an association of judgments. The association of ideas is said to proceed according to three principles – those of resemblance, of contiguity, and of causality. But it would be equally true to say that signs denote what they do on the three principles of resemblance, contiguity, and causality. There can be no question that anything is a sign of whatever is associated with it by resemblance, by contiguity, or by causality: nor can there be any doubt that any sign recalls the thing signified. So, then, the association of ideas consists in this, that a judgment occasions another judgment, of which it is the sign. Now this is nothing less nor more than inference.

Everything in which we take the least interest creates in us its own particular emotion, however slight this may be. This emotion is a sign and a predicate of the thing. Now, when a thing resembling this thing is presented to us, a similar emotion arises; hence, we immediately infer that the latter is like the former.

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What is here said of association by resemblance is true of all association. All association is by signs.

Synthetical consciousness degenerate in the second degree, corresponding to intermediate thirds, is where we think different feelings to be alike or different, which, since feelings in themselves cannot be compared and therefore cannot be alike, so that to say they are alike is merely to say that the synthetical consciousness regards them so, comes to this, that we are internally compelled to synthesize them or to sunder them. This kind of synthesis appears in a secondary form in association by resemblance.

The meanings of words ordinarily depend upon our tendencies to weld together qualities and our aptitudes to see resemblances, or, to use the received phrase, upon associations by similarity; while experience is bound together, and only recognisable, by forces acting upon us, or, to use an even worse chosen technical term, by means of associations by contiguity.
...when the mind declares that what it sees now, or remembers to have seen yesterday, is like what it remembers to have seen last week, the likeness, which though accompanied like all mental processes with a peculiar and characteristic sensation, is mainly a fact, a mental fact, and the sensation of it is of no consequence except as an advertisement of that fact. That fact is that by virtue of the occult working of the depths within us, those two feelings coalesce into one notion. For the sake of calling this by a familiar name, I call this association by similarity. But the ideas united by virtue of an occult inward power, are not always regarded as similar.

As experience clusters certain ideas into sets, so does the mind too, by its occult nature, cluster certain ideas into sets. These sets have various forms of connection. The simplest are sets of things all on one footing and agreeing in each belonging to the set. Such a set is a class. The clustering of ideas into classes is the simplest form which the association of ideas by the occult nature of ideas, or of the mind, can take. Now, just as in association by contiguity an idea calls up the idea of the set in which experience has placed it, and thence one of the other ideas of that set, so in association by resemblance an idea calls up the idea of the set in which the mind’s occult virtue places it, and that conception perhaps gives, owing to some other circumstance, another of the particular ideas of the same set. Everybody has heard in conversation a person remark, “What you say puts me in mind of a similar occurrence.” That is suggestion by resemblance. Association by contrast is a case of association by resemblance, which is so called after its most prominent variety. Suggestion by resemblance means, let it be repeated, the indirect suggestion by one idea of another which has, by virtue of the occult nature of ideas or of the mind, been associated with it into one set. All the suggestions of pure mathematics, of which there is a vast body, are associations by resemblance.

Psychologists recognize that the suggestion of one idea by another may take place according to either one of two different principles; for an idea may suggest another like it, or it may suggest another which has been connected with it in experience. Thus, the thought of Niagara may suggest a hero or anything else that is grand, and so similar to the cataract, or it may suggest a crowd of importunate hackdrivers, which is connected with the place in every visitor’s experience.

Association of the latter kind, association by contiguity as it is called, is the more typical. In it the characteristics of mental association are more strongly marked. Association by similarity is related to association by contiguity somewhat as our inward consciousness is related to outward experience; the one association is due to a connection in outward experience, the other to a connection in our feelings.

Habits are either habits about ideas of feelings or habits about acts of reaction. The ensemble of all
habits about ideas of feeling constitutes one great habit which is a World; and the ensemble of all
habits about acts of reaction constitutes a second great habit, which is another World. The former is
the Inner World, the world of Plato's forms. The other is the Outer World, or universe of existence. The
mind of man is adapted to the reality of being. Accordingly, there are two modes of association of
ideas: inner association, based on the habits of the inner world, and outer association, based on the
habits of the universe. The former is commonly called association by resemblance; but in my opinion, it
is not the resemblance which causes the association, but the association which constitutes the
resemblance. An idea of a feeling is such as it is within itself, without any elements or relations. One
shade of red does not in itself resemble another shade of red.

1898 | Cambridge Lectures on Reasoning and the Logic of Things: Habit | RLT 234; CP 7.498

Association is of two kinds. For, on the one hand, it may be a natural disposition, which was from birth
destined to develop itself whatever the child's outward experiences might be, so long as he was not
maimed nor virtually maimed, say by being imprisoned. This sort of association by virtue of which
certain kinds of ideas become naturally allied, as crimson and scarlet, is called association by
resemblance. The name is not a good one, since it implies that the resemblance causes the
association, while in point of fact it is the association which constitutes the resemblance. In themselves
considered any two sense-qualities are what they are to themselves alone and have no relation to one
another. But could they be compared by a mind that brought no tinge of its own nature into the
comparison, any two ideas would appear somewhat alike and somewhat different. But the human mind
attaches a peculiar value and emphasis to some resemblances, and that consists in this, that when one
quality is brought vividly to consciousness, others will at once have their vividness increased, some
more, some less. Thus, an idea which may be roughly compared to a composite photograph surges up
into vividness, and this composite idea may be called a general idea. It is not properly a conception;
because a conception is not an idea at all, but a habit. But the repeated occurrence of a general idea
and the experience of its utility, results in the formation or strengthening of that habit which is the
conception; or if the conception is already a habit thoroughly compacted, the general idea is the mark
of the habit.

nd | Fragment on Consciousness and Reasoning [R] | CP 7.554

Consciousness is rather like a bottomless lake in which ideas are suspended, at different depths.
Percepts alone are uncovered by the medium. The meaning of this metaphor is that those which [are]
deeper are discernible only by a greater effort, and controlled only by much greater effort. These ideas
suspended in the medium of consciousness, or rather themselves parts of the fluid, are attracted to
one another by associational habits and dispositions, - the former in association by contiguity, the
latter in association by resemblance.