THE CRITIC OF ARGUMENTS.

1. EXACT THINKING.

By Charles S. Peirce.

"Curius" is a word used by Locke in English, by Kant in German, and by Plato in Greek, to signify the art of judging, being formed like "logic." I should shrink from heading my papers Logic, because logic, as it is set forth in the treatises, is an art far worse than useless, making a man captious about trifles and neglectful of weightier matters, condemning every inference really valuable and admitting only such as are really childish.

It is taught to do what matters nothing;
Now, manners forbid me to run off my hair;
Therefore it would be lengthy for me to run off my hair.

This is the type of reasoning to which the treatises profess to reduce all the reasonings which they approve. Reasoning from authority does, indeed, come to that, and in a broad sense of the word authority, such reasoning only. This reminds us that the logic of the treatises is, in the main, a heritage from the ages of faith and obedience, when the highest philosophy was conceived to lie in making everything depend upon authority. Though few men and none of the less sophisticated minds of the other age ever, nowadays, plunge into the darkling flood of the medieval commentators, and fewer still dive deep enough to touch bottom, everybody has received the impression they are full of syllogistic reasoning; and this impression is correct. The syllogistic logic truly reflects the sort of reasoning in which the men of the middle ages sincerely put their trust; and yet it is not true that even scholastic theology was sufficiently prostrate before its authorities to have possibly been, in the main, a product of ordinary syllogistic thinking. Nothing can be imagined more strongly marked in its distinctive character than the method of discussion of the old doctors. Their one recipe for any case of difficulty was a distinction. That drawn, they would proceed to show that the difficulties were in force against every member of it but one. Therein all their labor of thinking lies, and thence comes all that makes their philosophy what it is. Without pretending, then, to pronounce the last word on the character of their thought, we may, at least, say it was not, in their sense, syllogistic; since in place of syllogisms it is rather characterized by the use of such forms as the following:

Everything is either P or M,
S is not M,

S is P.

This is commonly called disjunctive reasoning; but, for reasons which it would be too long to explain in full, I prefer to term it dilemmatic reasoning. Such modes of inference are, essentially, of the same character as the dilemma. Indeed, the regular stock example of the dilemma (for the logicians, in their gregariousness, follow their leader even down to the examples), though we find it set down in the second-century commonplace-book of Aulus Gellius, has quite the ring of a scholastic disquisition. The question, in this example, is, ought one to take a wife? In answering it, we first distinguish in regard to wives (and I seem to hear the Doctor sublissimous saying: prima distingua est de hoc numine morte). A wife may mean a plain or a pretty wife. Now, a plain wife does not satisfy her husband; so one ought not to take a plain wife. But a pretty wife is a perpetual source of jealousy; so one ought not to take a pretty wife. In sum, one ought to take no wife, at all. It may seem strange that the dilemma is not mentioned in a single medieval logic. It first appears in the "De Dialectica" of Rufinof Agricola. But it would surprise nobody that the most characteristic form of demonstrative reasoning of those ages is left unnoticed in their logical treatises. The best of such works at all epochs, though they reflect in some measure contemporary modes of thought, have always been considerably behind their times. For the methods of thinking that are living activities in open are not objects of reflective consciousness. They baffle the student, because they are a part of himself.

"Of those who I am unteachable"

says Emerson's sphinx. The methods of thinking men consciously admire are different from, and often, in some respects, inferior to those they actually employ. Besides, it is apparent enough, even to one

possibly in some other form, I have written. My memory may deceive me; and my library in precious small.
Aristotle. The analogue of the principle of identity, when \( f(x) \) is the copula of the proposition, is that everybody loves a lover. This would plainly not suf- fice to make the inference invalid; nor would it be false that form from being valid, provided loving were a transitive relation. But, by a little exact thinking, the principle of identi- ty is clearly to be neither a sufficient nor a necessary condition for the truth of Barbara.

Let us now examine the negations. The simplest of these is Celarent, which runs as follows:

- If \( A \) is not \( B \)
- If \( A \) is not \( C \)
- Then \( A \) is not \( B \)

Let us substitute \( B \) for \( B \) and then the form be- comes:

- Every \( A \) is not \( B \)
- Every \( C \) is not \( D \)
- Every \( C \) is not \( D \)

This is a good inference, still, no matter what sort of relation injuring is. Consequently, this syllogism is dependent upon no property of negation, except that it expresses a relation. Let us, in the last form, substitute:

- \( A \) is \( D \)
- \( B \) loves \( C \)
- \( C \) injures \( D \)

In order that this should hold good irrespective of the nature of the relation of injuring, it is necessary that nobody should love anybody himself. A relation of that sort is called a syllogism. Of course, every syllogism is transitive.

The next simplest of the universal negative syllogisms is Camestres. This runs thus:

- If \( A \) is \( D \)
- If \( A \) is not \( B \)
- Then, we get:

\( A \) injures \( B \)
\( A \) loves \( C \)
\( C \) injures \( D \)

Now the question is, what one of the properties of the relation of subject to predicate is it, with the de- struction of which all properties of identity cease to invariably yield a true conclusion from true premises? To find out that way the obvious way by to destroy all the properties of the relation in question, so as to make it an entirely different reasoning, and then note what condition this relation must satisfy in order to make the inference valid. Putting \( f \) in place of \( A \), we get:

\( f \) loves \( B \)
\( f \) loves \( C \)
\( C \) injures \( D \)

That this should be universally true, it is necessary that every lover should love whatever his beloved loves. A relation of this sort is called a transitive relation. Accordingly, the condition of the validity of Celarent is that the relation expressed by the copula should be a transitive relation. This state- ment was first accurately made by De Morgan, but it is in substantial agreement with the doctrine of

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THE OPEN COURT.

To make this good, it must be that the only person who admires everybody that admires a given person is that person. This is the analogy of "everything not with me is against me," which is the principle of exclusion.

A STUDY OF FOLK-SONGS.

By C. L. Vance.

In the last number of the Journal of American Folklore the editor, Mr. Newell, says that "the time has not yet come for a comparative study of folk-song." It is argued that the materials for such a study are wanting. That may be so—in part. But many students of folk-lore will find the materials already gathered sufficient for their purposes; for example, to show the evolution of song. The evidence is about all in. If any branch of folk-lore has been thoroughly explored and the results published, it is popular song. It is not likely that many new discoveries will be made to change commonly-accepted opinions on the subject.

The significance and value of folk-song are now pretty well understood. Whenever the folk-song has sprung up and flourished it has come from the life of the people—and has grown out of the soil they trod and ploughed. Hebrews, Greeks, and Romans all had these songs, and while the house-wives lightened their domestic labors with their country melodies, the men ploughed many a furrow to their tune, and forged the war-weapon to their rhythm. Centuries later the Master-singers came and chastened rude poetic strains.

"As the weaver plied the shuttle so did the singer plait his strain.
And the youth his feet resonated to the arrow's strain.

With the migration of the German, the warrior Teuton sang as he lived. The greater part of his life was devoted to hunting and fighting, broken into by idle enjoyment and wild revelry. Now and then his war-song was attuned in peaceful key, but more often urging the singer to battle-axe and ear with dash and a vigor that made Roman enemies fear him as a fierce and cunning foe. It is strains such as these—strains which have sprung out of conflict and plundering expeditions, and out of the every-day joys and sorrows—that reflect human nature in its natural moods and aspects.

Mr. Darwin refers to that deep-seated instinct of man, which impels him in all moods of strong or intense feeling to break out into a kind of chant. Such emanations well up from the heart: the lover describes in the charms of the maid, the sower casting seed, the reaper swinging his sickle, the shepherd minding his flock, the fisherman mending his nets, the soldier on the march, the mourner at the grave—these chanted something, when music as an art still was not, and what such was is more or less faithfully reflected in Volkslieder, and in every country's national melodies.

Above all, folk-song tells of the existence and everyday life of the workers, in-door and out-door, and that has, for us, a special value and significance. It is the habit of uncultured peoples to break out into song, at the slightest provocation. Many individuals can compose extemporaneous. Thus the New Zealand singers describe passing events in extemporary songs. The Lamentation, says a writer, lived their labors with song—"one of which was composed extemporary, for it was the subject of it." The Kirghises in Asia, says the Rev. Dr. Lamot, "have a keen appreciation of singing and improvisation. No young girl commands such admiration as one who is clever at singing reports; and no men are so liked by the Kirghises as good and able singers.

In the lower stages of culture the improvisations often claims to be inspired. He obtains his songs from spirits. In Australia the "song-makers" are Bora-arks, or shamans. According to Mr. A. W. Howitt, the Bora-arks of the Kurnai tribe "profess to receive their inspiration from the ghosts (marts) as well as the dances, which they were supposed to have seen first performed in ghostland." The Eskimos have singing-masters, who instruct both young and old in the ancient songs. The natives build large houses for singing. The master of the singing house is a terror, or spirit, with whom the Angakok, or Shaman, is supposed to be in communication.

Dr. Franz Boas, who has made a careful study of Eskimo songs, says that "the form of both old and new songs is very strict. There must be no deviation from the words and rhythms fixed for all time. According to the same authority, the Kwanakl Indians of British Columbia are very particular in this respect, and any mistake made by a singer is considered opprobrious. "On certain occasions the singer who makes a mistake is killed." The singer, in the practice of his religion, regards song as a very serious matter. His medicine-men obtained the verses from the spirits, and they would be offended by any change. Perhaps the most irregular kind of singing are the dirges, or "lamentations," which are chanted over the graves of the dead. And yet a comparative study of these mournful tunes will show that the balladings of widely-separated people have elements in common. The restful funeral chants consist simply of howlings and irregular callings. The words of a death dirge sung by the Sené Indian of California, as given by Mr. Powers, are as follows:

"Heil le-ke-ke,
Heil le-ke-ke,
Heil le-ke-ke.

The Basques of Spain ululate thus

La la la la la,
La la la la la,
La la la la la.

La la la la la,
La la la la la,
La la la la la.

La la la la la,
La la la la la,
La la la la la.

The Basques of Spain ululate thus

La la la la la,
La la la la la,
La la la la la.

La la la la la,
La la la la la,
La la la la la.

La la la la la,
La la la la la,
La la la la la.

La la la la la,
La la la la la,
La la la la la.