Geology depends on impressions made by floods, earthquakes, volcanoes, on the surface of the earth. And an impression is something that to a certain extent goes below the surface.

Physics and chemistry depend on similar processes: impressions change the surface and enable us to reduce the surface phenomena to deeper relations.

In medicine, a serum or antidote becomes of interest when it leaves a real impression in the living organism.

True science of nature bases itself on more or less violent impressions made on stones, metals, scales, thermostats, human bodies. Any specific kind of impression has found expression in a specific science, from geology to biology. And no scientific fact may be verified statistically or mathematically or rationally before it has made an indelible impression.

If we could know on what element in the universe a social fact must have made an impression before it can become a scientific fact we might be able to organize the various social sciences around the various impressions.

The social impressions are not made on the body. In an accident the broken leg is a physical fact and a medical problem; the social fact is a fact because "we" are impressed, mind and soul.

An impression made on us is the more profound the more it changes our mental processes, our moral appetites, our social habits. This it can only do when it throws our mind out of gear temporarily. Objectivation is recovered equilibrium after a shock. Objectivation is
impossible without the intervening shock.

A scientist who would try to observe a social fact before his mind was overwhelmed by it would simply depend on other people's first-hand impressions. Most people live that way. In our social studies, we may sometimes realize that our students are violently impressed. But we try to shorten their reaction, and blunt it instead of letting it reach its optimum of violence. A physician who would never allow his new drug to produce a fever, a physicist who from dread of an electrical shock would never throw down the electric switch which makes the connection, we should call cowards. Our students do not burst into tears, they do not lie sleepless over the future of this country, they are not left speechless before a real or artistic tragedy. Instead, we teach them creative writing, we feed them before they are hungry, we satisfy them when they are nothing but just curious which is an attitude peculiarly unfit for the imparting of social thought. For thought on society dawns on us, when we have been in the dark for quite a while and suffered from it; this "dawning" is a good expression because it depicts the problem of timing in the disclosure of any truth about man to man.

Objectivity then cannot be distorted into such cowardice.

Objectivity is the result of a cooling off process after we have been not. As hot as the water which we measured with the thermometer, as hot as the star whose light we computed, as hot as the volcano which the seismograph registered. Our impression is that which counts as the underlying fact; and no impression can be made on us without our getting hot under the collar.

Subjected to terror, crises, unemployment, war, anarchy, barrenness, the student and teacher must feel to have been before they can pretend to aim at scientific judgment. And in history
they must respect other people's joys and sorrows and suspense as
taking their own place (?) before any cultural change or political
decision of the past should be called important.

The teacher and the student of a social fact or thought must
observe together the phases of the impression made by social reality
on themselves. And they must realize the change which overtakes their
minds in this process. They must see themselves thrown into a common
social experience in a tumultuary fashion, with the resulting confusion
and without any anticipation of formulation, and then emerge out of it
slowly so that they may observe the process of becoming vocal about the
experience. And they become vocal by conversing about it with each
other, that is, inside the group which made the experience first,
and only much later are they able to communicate it to third parties.
In other words, articulation passes through the two very different
phases of membership conversation and membership tradition before it
can be communicated to outsiders, objectively. These three steps are
nearly always confused today.

Most so-called experiences made by modern man are no social
experiences, because they only change his sense memories but not his
mental categories. The individual nearly always tucks away even
radically new experiences under the old chapter headings and prefers
to do violence to his "experience" instead of changing his language
and organs of perception. The reason is that the group membership
conversation about an experience is mostly too difficult for one individ-
dual to carry on within himself. Social experiences become articulate
more easily through the conversing of members of an experiencing
group.
These processes of giving expression to common tumultuary experiences of a life-shaking character are the only solid anchor grounds for our social knowledge. A Catholic may now read Faust and understand what it is to be a true Protestant. But without the existence of three hundred years of Lutheranism, Goethe's Faust would not make sense.

The emerging from a common experience of a shaking character into group conversation first, group history second, and objective communication to non-participants, responds as precisely as possible to the methods we follow in geology and chemistry and physiology.

For any group a fourth (preliminary) phase precedes the actual experience, namely expectation. This phase is constituted by the element of the imperative, the crucial, the awful in the old sense of awe, and in this phase the awe of the unknown will have to be matched by the enthusiastic or heroic responses and for no soldier before battle is there anything else he can do but lift himself up to the level on which a man will lay down his life.

In battle, he may realize the marching tunes and the co-operative comradeship during peril. Afterwards, the quiet satisfaction of victory and the sorrow of defeat will fill him, and all this will coalesce into an historical consciousness which attaches him to the event. Now only, does the detachment set in, and when the "objective" history is written, the healthy war veteran is already bending over his next passionate task in life.

These elementary reactions of a person must have been observed inside the student or the study group themselves before any other facts actually will make sense to them. They may have stored many
facts in their memories but for that matter they still belong to the realm of mere nature and have not yet reached the status of a social thought or fact inside the student.

I venture to suggest that an estimate be made how much of the social facts we teach are natural facts to the student instead of social facts. A natural fact is a fact which has never been realized as having been once imperative and crucial; to wit at the time when it did not exist and had to be called into existence, and as having been once in peril not to come forth at all. We do not tremble about nature's course. But we cannot have any insight into any social thought if we do not identify ourselves with the situation which existed before the event, during the event, and after the event, in the hearts and minds of the people to whom it fell to live through it.

We must create methods, then, it would seem, by which students may learn to cultivate their own attachments to a future event, their own loyalty to it when in process, their own pride in it after achievement (or dissatisfaction after failure; even more instructive).

We move on the level of social thought instead of opinion only when the respect for the necessity of these different attitudes, before, during, and after a difficult and far-reaching social task, has become an experienced reality in our students.

The attachment which in nature the mountains, plants, animals, have instead of ourselves, must become an experience to the student before he can be stimulated to learn how to detach himself. Otherwise the most central social facts will be shelved by him in the museum of natural history. It is a sad trick of providence that the encyclopaedic experiences of one generation generate in the next
generation the indifference of readers of the Encyclopaedia Britannica. Attachment if it takes precedence over detachment, takes time. Since we are afraid that we do not have this time, we teach our answers long before the students are made hungry for any question. The questions which are asked by our students, in social debate or question periods, are most distressing. They are worthless because they are not necessary to the boys' real existence; they are mere intellectual calisthenics and usually go to show that the boy has not learned to write off a thousand questions of mere boredom for one question, which must be asked by all or at least by each generation, and must then be answered by the efforts of a lifetime. As long as we do not differentiate clearly between these two classes of questions of utterly distinct character, only natural thought will be transmitted by our social sciences. And natural thought means that its thinker remains a product of his social environment, a mere contemporary of his time, without the power to create or master time by pausing, insisting and reproducing himself the imperatives which created society.