A first determination of the notion of judgment is reached by relating it to propositions.

For present purposes it will suffice to distinguish 1) utterance, 2) sentence, and 3) proposition, in the following summary manner.

If you say "The king is dead" and I say "The king is dead," then there are two utterances but only one sentence.

If you say "Der König ist tot" and I say "The king is dead," then there are two utterances and two sentences but only one proposition.

Similarly, if you write in decimal notation "2 + 2 = 4" and I write in binomial notation binary notation "10 + 10 = 100," again there are two utterances and two satences but only one proposition.

Further, it will be supposed that utterances may be spoken, written, or merely imagined, and that the imagining may be visual, auditory, or motor; again, grammarians distinguish declarative, interrogative, imperative, optative, and exclamatory sentences, but of these only the declarative corresponds to the proposition.

Now with regard to propositions there are two distinct mental attitudes: one may merely consider them; or, one may agree or disagree with them. Thus, what I write, I also affirm; but what you are reading, you may neither affirm nor deny but merely consider.

A proposition, then, may be simply an object of thought, the content of an act of conceiving, defining, thinking, supposing, considering.

But a proposition, also, may be the content of an act of judging; and then it is the content of an affirming or denying, an agreeing or disagreeing, an assenting or dissenting.

A second determination of the notion of judgment is reached by relating it to questions.

Questions fall into two main classes. There are questions for reflection, and they may be met by answering "Yes" or "No." There are questions for intelligence, and they may not be met by answering "Yes" or "No."

Thus, one may ask, Is there a logarithm of the square root of minus one? This is a question for reflection. It is answered correctly by saying "Yes." On the other hand, though it would be a mistake to answer "No," still that answer would make sense. But if one asks, What is the logarithm of the square root of minus one? there is no sense in answering either "Yes" or "No." The question is not for reflection but for intelligence. The only appropriate answer is to show that the square root of minus one results from raising a given base to a certain power.

Our second determination of the notion of judgment is, then, that judging is answering "Yes" or "No" to a question for reflection.

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A third determination of the notion of judgment is that it involves a personal commitment. As de la Rochefoucault remarked, Everyone complains of his memory but no one of his judgment. One is ready to confess to a poor memory because one believes that memory is not within one's power. One is not ready to confess to poor judgment because the question for reflection can be answered not only by "Yes" or "No" but also by "I don't know"; it can be answered assertorically or modally, with certitude or only probability: finally, the question as presented can be dismissed, distinctions introduced, and new questions substituted. The variety of possible answers makes full allowance for the misfortunes and short-comings of the person answering, and by the same stroke it closes the door on possible excuses for mistakes. A judgment is the responsibility of the one that judges. It is a personal commitment. However, just what a person is, or what responsi-

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However, just what a person is, or what responsibility is, or why the person is responsible for his judgments, are further questions that cannot be considered as yet. We now observe the fact and leave the explanation to more appropriate occasions.

On the basis of the foregoing determinations we may now attempt to relate judgment to the general structure of our cognitional process. We distinguish a direct and an introspective process, and in both of these we distinguish three levels, *x*, level, of experience, a level of intelligence, and a level of reflection.

Hitherto, our incuiry has centered on the level of intelligence. It consists in acts of inquiry, understanding, and formulization. Thus, the question, What is it? leads to a grasp and formulation of an intelligible unity-identity-whole in data as individual. The question, Why? leads to a grasp and formulation of a law, a correlation, a system. The question, How often? leads to a grasp and formulation of an ideal frequency from which actual frequencies non-systematically diverge... Our account of the classical and statistical phases of empirical method, of the notion of the thing, of explanatory abstraction and system, pertains has been concerned with the level of intelligence in cognitional process.

However, this level of intelligence presupposes and complements another level. Inquiry presupposes elements in knowledge about which inquiry is made. Understanding presupposes presentations to be understood. Formulation expresses not only what is grasped by understanding but also what is essential to the understanding in the understood. This prior level, was described in the section on data, images, and percepts. It is the level of accordance. Its defining characteristic is the fact that it is presupposed and complemented by the level of intelligence, that it supplies, as it were, the raw materials on which intelligence operates, that, in a word, it is empirical, given indeed but merely given, open to understanding and formulation but by itself not understood and in itself ineffable.

The reader may object to the use of the mane, ex Grience, in characterising this to denote this level in cognitional process. When we speak of a man of experience, we mean one that not merely has led a rich and varied sensitive lifne but also has understood what was going on and acquired an ability to judge shewdly and correctly. Again, when Kant

Thirdly, the level of intelligence, besides presupposing and complementing an initial level, is itself presupposed and complemented by a further level of reflection. The formulations of understanding yield concepts,

definitions, objects of thought, suppositions, considerations. But man demonds more. Every answer to a question for intelligence raises a further question for reflection. There is an ulterior method to conceiving and defining, thinking and considering, forming suppositions, hypotheses, theories, systems. That motive appears when such activities are followed by the question, Is it so? We conceive in order to judge. As questions for intelligence, What? and Why? and How often? stand to insights and formulations, so questions for reflection stand to a further kind of insight and to judgment. It is on this third level that there emerge the notions of truth and falsity, of certitude and the probability that is not a frequency but a quality of judgment. It is within this third level that there is involved the personal commitment that makes one responsible for one's judgments. It is from this third level that come utterances to express one's affirming or denying, assenting or dissenting, agreeing or disagreeing.

phe three levels of cognitional process.

Initial Level: Data Perceptual Images. Free Images. Utterances. Second level: Quesations for Intelligence. Formulations Insights had level: Questions for Reflection. Reflective Insight. Judgment. It will be observed that the question for intelligence, not as uttered in words nor even as formulated in concepts but simply as contained in the attitude of the inquiring mind, effects the fransition from the initial to the second level. Similarly,/it is the question for reflection, simply as the attitude of the priveral critical mind, that effects the transition from the of reflective insight is reserved to the next section.

It will be useful to represent schematically the three levels of cognitional process.

I. Data, Percepteal Images, Free Images; Utterances.

Insights.

Formulations.

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III. Questions for Reflection. Reflection. Judgment.

Questions for Intelligence.

The second level presupposes and complements the first. The third level presupposes and complements the second. The exception lies in free images and utterances which commonly are under the influence of the higher levels before they provide a basis for inquiry and reflection. Further, by questions for intelligence and reflection are not meant utterances or even conceptual formulations; by the question is meant the attitude of the inquiring mind that effects the transition from the first level to the second and, again, the attitude of the critical mind that effects the transition from the second level to the third.

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Finally, the scheme is anticipatory inasmuch as the nature of reflection comes up for discussion only in the next section.

Now, as has been remarked, the three levels of the cognitional process operate in two modes. Data include data of sense and data of consciousness. Data of sense include colors, shapes, sounds, odors, tastes, the hard and soft, rough and smooth, hot and cold, wet and dry, and so forth. The dimect missa mode of cognitional process begins from data of sense advances through insights and formulations to reach reflection and judgment. Thus, empirical science pettains to the direct udvances of vegnetional process!

mde mode of cognitional process. On the other hand, the data of consciousness consist of acts of seeing, hearing, tasting, smelling, touching, perceiving, imagining, incuiring, understanding, as experiencedformulating, reflecting, judging, and so forth. As data, such described,/ acts are experienced; but/they are not/distinguished, compared, related, defined for all such activities are the work of inquiry, insight, and formulation. Finally, such formulations are, of themselves, just hypotneses; they may be accurate or inaccurate, correct or mistaken; and to pronounce upon them is the work of reflection and judgment. Thus, the three levels of the direct mode of cognitional process provide the data for the introspective mode; and as the direct mode, so also the introspective unfolds on the three s levels, an initial level of data, a second level of understanding and formulation, and a third level of reflection and judgment.

> The foregoing offers an analysis of cognitional process. A whole is divided into different levels; on each level different kinds of operation are distinguished and related; each level is related to the others; and two modes of the whole process are contrasted. But analysis prepares the way for synthesis. Accordingly we have now to ask how the various elements come together to constitute knowing. As yet, we are unprepared to answer the Kantian question that regards the constitution of the relation of knowing subject and known object. Our concern is the more elementary question of the unification of the contents of several acts into a single known content.

To this the general answer has already been indicated. Contents of different acts come together inasmuch as the earlier are incomplete without the later while the later have nothing to complete without the earlier. Questions for intelligence presuppose something to be understood, and that something is supplied by the initial level. Understanding grasps in given or imagined presentations an intelligible form emergent in thep presentations. Concertion formulates the grasped idea along with what is essential to the idea in the presentations. Reflection asks whether such understanding and formulation are correct. Judgment answers that they are or are not.

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The cognitional process is thus a cumulative process: later steps presuppose earlier contributions and add to them. However, not all additions have the same significance. Some are merely provisional, as are free images. Some put together in a new mode the contributions of previous acts; thus, abstract formulation puts generally what insight grasps in a particular presentation. Finally, some constitute, as it were, the addition of new dimensions in the construction of the full cognitional content; and it is this addition of a new dimension that forms the basis of the distinction between the three levels of presentation, intelligence, and reflection.

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From this viewpoint one may distinguish between the proper and the borrowed content of judgment.

The proper content of a judgment is its specific contribution to cognitional process. This consists in the answers "Yes" or "No."

The borrowed content of a judgment is twofold. There is/direct borrowed content that is found in the question to which one answers "Yes" or "No"; and there is the indirect borrowed content that emerges in the reflective act linking question and answer, that claims the "Yes" or "No" to be true and, indeed, either certainly or only probably true.

Thus, the direct borrowed content of the judgment, "I am writing," is the question, "Am I writing?" The proper content of that judgment is the answer, "Yes," "I am." The indirect borrowed content of the same judgment is the implicit meaning, "It certainly is true that I am writing."

Again, from the same viewpoint, the judgment may be described as the total increment in cognitional process. Every element in that process is at least a postered, partial increment. It makes some contribution to knowing. But the judgment is the last act in the spries that begins from presentations and advances through understanding and formulation ultimately to reach reflection and affirmation or denial. Thus, the proper content of judgment, the "Yes" or "No", is the final partial increment in the process. But this proper content is meaningless apart from the question it answers. With the question it forms an integrated whole. But the question takes over a formulation from the level of intelligence, and that formulation draws upon both insight and presentation. I It follows that the judgment as a whole is a total increment in cognitional process, that it brings to a close one whole step in the development of knowledge.

Finally, there is the contextual aspect of judgment. Though single judgments bring single steps in inquiries to their conclusion, still the single steps are related to one another in a highly highly complex fashion.

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The most general aspects of cognitional context are represented by logic and dialectic. Logic is the effort of knowledge to attain the coherence and organization proper to any stage of its development. Dialectic, on the other hand, rests on the break-down of efforts to attain coherence and organization at a given stage and consists in bringing to birth a new stage in which logic again will endeavor to attain coherence and organization.

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From the viewpoint of the logical ideal, every term has one and only one precise meaning, every relation of every term to every **ideau** other term is set down in an unequivocal proposition, the totality of propositions is neatly divided into primitive and derived, the derived may all be obtained by the rules of inference from a minimum number of primitive propositions, no proposition contradicts any other and, finally, the employment of the principle of excluded middle does not introduce undefined or false suppositions as does the question, Have you or have you not stopped beating your wife?

Now the pursuit of the logical ideal, so far from favoring a static immobility, serves to reveal the inadequacy of any intermediate stage in the development of knowledge. The more deeply it probes, the more effectively it forces the cognitional process to undergo a radical revision of its terms and postulates and so to pursue the logical ideal from a new base of operations. However, such revision has its limits, for there is no revision of revisers themselves. They are subject to the general conditions of beginning from presentations, advancing through insights and formulations, to terminate with reflections and judgments. Their insights are grasps of concrete unities, of systematic regularities, or of ideal frequencies diverging non-systematically from the systematic. Their judgments are personal commitments to a "Yes" or "No"; both answers cannot be given to the same question; and, under ideal conditions, either one of the two answers has to be given. The simple fact of the uniformity of nature in revisers provides both logic and dialectic with an immutable ultimacy.

Within the general schemes of logic and dialectic, the contextual aspect of judgment appears in gover manners.

There is the relation of the present to the past. Thus, past judgments remain with us. They form a habitual orientation, present and operative, but from behind the scenes. They govern the direction of attention, evaluate insights, guide frmulations, and influence the acceptance or rejection of new judgments. Previous insights remain with us. They facilitate the occurrence of fresh insights, exert their influence on new formulations, provide presuppositions that underlie new judgments whether in the same or in connected or in merely analogous fields of inquiry. Hence, once a new judgment is made, there is within us a habitual context of insights and other judgments, and it stands ready to elucidate the judgment just made, to complement it, to elucidate the judgment just made, to complement of qualifications, to provide defence, to offer evidence or proof, to attempt persuasion.

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Secondly, there are the relations within the present. Existing judgments may be found to 2 conflict, be and so may release the dialectical process. Again, though they do not that conflict, they may not be completely independent of each other, and so they stimulate the logical effort for organized coherence.

Thirdly, there are the relations of the present The questions we answer are few compared to the to the future. questions that await an answer. Knowing is a dynamic structure. If each judgment is a total increment consisting of many parts, still it is only a minute contribution towards the whole of knowledge. But, further, our knowing is dynamic in another sense. It is irretrievably habitual. For we can make but one judgment at a time, and one judgment cannot bring all we know into the full light of actual knowing. A judgment may be very comprehensive and so bear witness to the depth and breadth of our perspectives. It may be very concrete and so reveal our grasp of nuance and detail. But it cannot be both comprehensive and concrete. All we know is somehow with us; it is present and operative within our knowing; but it lurks behad the scenes and it reveals itself only in the exactitude with p which each minor increment to our knowing is effected. The business of the human mind in this life seems to be, not contemplation of $^{\vee}$ what we know, but relentless devotion to the task of adding increments to a merely habitual knowledge.