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SOURCES

The Psychology of Intellectual and Moral Hearts (1941)

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[Editorial Note: The following article, "The Psychology of Intellectual and Moral Habits," first appeared in *Les Études Classiques* 5, no. 3 (July 1936): 433–46, under the title "Psychologie des habitudes intellectuelles et morales." It presents a synthesized version of Jaime Castiello, S.J.'s doctoral dissertation, *Geistesformung: Beiträge zur experimentellen Erforschung der formalen Bildung* (Ferd. Dümmlers Verlag, 1934), in which he brings together experimental psychology, educational theory, and Catholic humanism to explore how intellectual and moral habits are formed and generalized. Written in the interwar period amid German debates on secondary education and the rise of experimental studies of conditioning, transfer of training, and affective attitudes, the essay offers a contemporaneous perspective on how the "formation of the spirit" might be investigated empirically without relinquishing a robust account of value, freedom, and the self. Castiello's analysis traces the respective roles of method, ideal, and affective attitude in habit formation, drawing on Anglo-American laboratory research as well as his own experiments with secondary students and primary-school pupils to argue that durable habits and attitudes emerge at the intersection of pedagogy, environment, and interior motivation.

This republication invites readers to revisit Castiello's reflections in light of subsequent developments in psychology, education, and Jesuit pedagogy, especially contemporary efforts to articulate more clearly the intellectual, moral, and spiritual habits that schools seek to foster. While an English

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translation of this essay appeared in the *Jesuit Educational Quarterly* 4, no. 2 (1941): 57–70 by John E. Mahoney, S.J., the present version draws on a broader range of Castiello's texts and sources in order to offer an alternative translation with expanded annotation. This edited and translated version takes into account Castiello's German monograph on *Geistesformung*, a typewritten English translation of his book prepared during his time at Fordham University, and the original French publication of the article. Footnotes enclosed in brackets are editorial additions, Castiello's often abbreviated citations have been extended for greater clarity, and elements of formatting or emphasis lost in the 1941 translation have been restored wherever possible. Read alongside current work on formation, character education, and the psychology of learning, Castiello's essay underscores both the limits of purely mechanistic models of "mental gymnastics" and the enduring importance of ideals, environments, and affective complexes in shaping a learner's stance toward truth, goodness, and beauty. Set within this broader conversation, the 1936 study invites readers to reflect on its central conviction that genuine formation cannot be reduced to the repetition of external acts, but requires the unveiling and assimilation of values capable of engaging the whole person.]

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The Psychology of Intellectual and Moral Habits

The great problem of education is to know how to realize in the child that type of person one judges to be the best. For us Catholics, the Gospel is there, together with dogma, philosophy, and the papal encyclicals, which give us the abstract formula of the ideal human type. But the task is to create this perfection in living matter; and alongside the general laws that state eternal truths, the educator longs for clear psychological statements that will tell them the art of gradually tracing, on the features of a child, the face of a mature person. It is such statements that we attempt here.[1]

The problem is complex, and as soon as one sets out to tackle it, a thousand questions bristle up. The task is to form a human being, that is to say, to give a form to his spirit.[2] I am quite willing to say that the form of the spirit is constituted by habits; but are there only habits? Do not atti-

1 This article briefly summarizes my book, *Geistesformung, Beiträge zur experimentellen Erforschung der formalen Bildung* (Ferd. Dümmlers Verlag, 1934).

2 [The word used here is *esprit*, which can be understood as both 'mind' and 'spirit.' In his German, Castiello utilizes the term *geist*, which has a similar dual meaning. Throughout this text, the term 'spirit' has been used as the translation to avoid the more cognitive connotations that 'mind' might have. In an unpublished translation of his book into English, he seems to also rely on the term 'spirit.']

tudes—those subconscious affective forms of attraction and repulsion, so important in our lives—also count as true forms of the spirit?

And if we confine ourselves to habits, do we possess a concrete formula for them? In the formation of a habit, what role is played by thought, by will, by feeling, by action, by repetition? What is the respective share of each? Once formed, is a habit specific or general? Or, to take up this question in concrete terms: will a child who is obedient at home be equally obedient at school? If I study the classical humanities, will I later be better able to study the experimental sciences? Again, which habits are specific, which are general? How can one transform a specific habit into a general habit? These are all problems that touch on life itself and lie at the foundation not only of education but also of ascetic practice.

All these questions could be studied from a philosophical or historical point of view. Without neglecting these avenues of inquiry, which are in any case indispensable, we shall adopt here the experimental method, for verified fact sharpens and sustains thought. "The abstract," Péguy said, "feeds on the concrete, and the concrete is illumined by the light of the abstract."

After analyzing certain experiments on habits conducted by others, I shall present two that I carried out in Germany; finally, on the basis of these experiments, I shall formulate a theory of habits, or mental forms.

Experiments Conducted from 1890 to 1934 on the Nature of Habits

To judge these experiments, we must take into account the standpoint of the psychologists who carried them out. For the most part English or American, they posed their problems on practical ground: does the study of Latin favor the study of French or of mathematics? Is there a "transfer of the effects of exercise" from one domain to another? In other words, are habits specific or general? Leaving aside a mere enumeration of their experiments—a good hundred of them—we shall content ourselves with presenting their research methods and the faculties thus studied. We shall then see what pedagogical conclusions can be drawn from these experiments.

I. Methods Employed and Faculties Studied

1. The Functional Method

The question is, for example, whether learning meaningless syllables has any influence on logical memory (memory for prose) and rhythmic memory (memory for verse). For three months, a group of children learns by heart syllables that have no meaning. Their logical and rhythmic memories have been tested before this trial. At the end of the three months, one com-

pares the present state of these memories with their earlier state. It is easy to see whether there is any change or not.

The principle of this method is as follows:

- Test the strength of a given faculty.
- Exercise this faculty in a domain different from the one in which it ordinarily operates.
- See whether the exercises carried out in this different domain have any effect on the strength of the faculty when applied once more to its original domain.

In this way researchers have studied: memory, attention, judgment, powers of observation, and aptitude for arithmetic, geometry, and language study (Latin, French, Spanish, German).

2. The Method of Assimilating an Ideal

By "ideal" we mean a fundamental idea which, by way of action, becomes associated with a cluster of secondary feelings or ideas. Take an ideal (neatness) applied to a specific domain (geometry homework). One then examines whether this ideal is or is not transferred to another domain (history homework). The habits thus studied include neatness, accuracy, powers of observation, and attention.

In connection with this method, we should note as very important the experiments of Dr. Knight Dunlap.[3] A child has the bad habit of biting his nails. He stops doing so if he is forced to bite them. In this and other similar cases, the action serves not to create the habit that corresponds to it, but to generate an inner attitude that is the opposite of that action. Is that not how some students in Catholic colleges, obliged to attend Mass every day, learn never again to go to Mass once they are free? In any case, we may conclude that a series of outward acts, produced in order to create a habit, is ineffective so long as these outward acts do not arise from an inner impulse. It is therefore impossible to shape the spirit of a young person in a environment that he judges artificial or odious.

3. The Affective, Irrational, and Subconscious Method

The experiments on affective attitudes begun by Pavlov and continued by J. B. Watson are, in my opinion, of very great importance. Watson worked with very young children. According to his findings, a baby has only three

3 Knight Dunlap, *Habits, Their Making and Unmaking* (Liveright, 1932).

instincts: fear, anger, and sexuality.[4] Fear, when he risks falling or hears a very loud noise; anger, when his freedom of movement is impeded; and finally, the sexual reflex. These three reflexes are tied to invariable stimuli. One can, however, by association, trigger these reflexes by means of other stimuli and thus create conditioned reflexes.[5]

An example: Albert (eleven months) is afraid only of loud noises and the danger of falling. Up to this age he has never been afraid of rats. But now, every time a rat is shown to him, a loud clanging of metal is produced near him. Albert then acquires the habit of being afraid of rats and of everything that resembles them (a rabbit, a small dog, a fur). Thus fear, formerly linked to the noise, is now also attached to everything that has the appearance of a rat.

Freud studied such transfers in the sexual domain with great detail;[6] and Shand[7] has shown how they occur in all affective complexes.

These observations have consequences for education. In practice, we thus transfer our affective complexes wholesale from one domain to another, so that a very strong feeling linked to a given object is almost automatically triggered in the presence of other objects that resemble the first. In this sense we can say that feelings are forms of the spirit. These attitudes do not have the rational character of habits, but their influence is no less considerable and constant—indeed, all the more so because of their irrational and subconscious character. Who does not know that an antipathy formed in youth can last a lifetime?

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4 [John B. Watson and J. J. B. Morgan, "Emotional Reactions and Psychological Experimentation," *The American Journal of Psychology* 28, no. 2 (April 1917): 163–74, https://doi.org/10.2307/1413718.]

5 [The experiment, which came to be known as the "Little Albert Experiment," by John B. Watson and Rosalie Rayner is described in Castiello's article below. John B. Watson and Rosalie Rayner, "Conditioned Emotional Reactions," *Journal of Experimental Psychology* 3, no. 1 (1920): 1–14: https://doi.org/10.1037/h0069608.]

6 [See for example, Sigmund Freud, "Three Essays on the Theory of Sexuality (1905)," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, vol. 7 (Hogarth Press, 1953); Sigmund Freud, "The Dynamics of Transference (1912)," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, vol. 12 (Hogarth Press, 1958).]

7 Alexander F. Shand, *The Foundations of Character: Being a Study of the Tendencies of the Emotions and Sentiments* (Macmillan and Co., [1917] 1920).

II. Conclusions Drawn from These Experiments

1. There are but three ways of forming the spirit (that is to say, of extending it to one or several domains), corresponding to the three methods we have just examined:

- by the assimilation of a method;
- by the assimilation of an ideal;
- by the formation of an affective attitude that is more or less conscious.

2. Laws determining the scope of a habit:

a. A habit acquired by the assimilation of a method is specific or general if the method remains specific or becomes generalized.
b. A habit acquired by assimilating an ideal is specific or general if the ideal is specific or general.
c. A habit acquired by forming an affective reaction never becomes fully generalized; but a certain transfer does in fact take place, more or less subconsciously, in accordance with the laws of affective transfer.

3. With regard to the formation of a habit by the assimilation of an ideal, Ida Saxby,[8] on the basis of a very interesting experiment, has established the following points:

a. The ideal is never developed without action.
b. In children, the ideal becomes associated with a certain external routine or method.
c. If this exterior routine is taken away, the ideal disappears. This last observation is confirmed by findings made in the United States. It has been noticed that, in a new milieu, the character of emigrants has a strong tendency to disintegrate.

4. It is a fact that most people do not generalize their experience. The tendency to generalize depends on two factors: the method of the teacher and the intelligence of the child.[9] The experiments of Hamblin in language teaching show that, according to the method employed, intellectual performance can triple or even quadruple as the transfer of habits extends to

8 Ida B. Saxby, "Some Conditions Affecting the Growth and Permanence of Desires," *British Journal of Psychology* 9, no. 1 (Dec. 1917): 93–149, https://doi.org/10.1111/j.2044-8295.1917.tb00218.x.

9 James R. Overman, *An Experimental Study of Certain Factors Affecting Transfer of Training in Arithmetic* (Warwick & York, Inc, 1931).

more domains. Overman, for his part, has shown that children of low intelligence benefit little from generalization. Strongly fixed on the concrete, they do not grasp relationships between things, etc. . . .

5. All these experiments have shown that one cannot mechanize the formation of human faculties. Memory, judgment, the power of observation, and taste can never be formed in one domain in such a way that they are thereby automatically developed in other domains. The transfer—or, if one prefers, the generalization—of an acquired habit depends on the generalization of the method or of the ideal that has been assimilated. We must therefore not delude ourselves about Latin. The effects of studying it will be felt in other domains only to the extent that methods and ideals are generalized.

6. According to the experiments of Thorndike,[10] *general intelligence does not depend on the type of studies one pursues*. By "general intelligence" we mean that innate intelligence—*quod Deus non dat, Salmantica non praestat*, as an old Spanish proverb says[11]—and which seems to grow with the brain and to atrophy with it. After several months of Latin or Greek, of chemistry or manual work, this general intelligence remains the same. Methods, ideals, attitudes have changed, but the original power seems to have remained what it was.[12] Thus the meaning becomes clearer of those misleading terms that are so often abused: "mental gymnastics," "development of the intelligence." These expressions mean nothing more than the assimilation of ideas, methods, and ideals, and the elaboration of particular kinds of psychological complexes.

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10 Edward L. Thorndike, "Mental Discipline in High-School Studies," *Journal of Educational Psychology* 15, no. 1 (1924): 1–22, https://doi.org/10.1037/h0075386; Cecil R. Broyler, Edward L. Thorndike, and Ella Woodyard, "A Second Study of Mental Discipline in High School Studies," *Journal of Educational Psychology* 18, no. 6 (1927): 377–404, https://doi.org/10.1037/h0073902.

11 [The Latin expression translates to "what nature does not give, Salamanca does not provide," invoking the University of Salamanca as a symbol of learning, and suggests that no amount of schooling can confer innate gifts such as natural intelligence.]

12 If one considers intellectual power in its full, concrete reality, it is obvious that the kind of studies one undertakes is of very great importance. A soldier's natural courage does not depend on his weapons; yet his concrete courage is not the same whether he is armed with a stick or with a rifle. So too, in the intellectual domain, it is not a matter of indifference whether one possesses only superficial values and methods or has assimilated values and methods that reach down to the very roots of one's being.

Two Experiments of My Own

I. Relation between the Type of Studies and the Formation of the Spirit

1. The Problem

Earlier we distinguished attitude from habit, saying that attitude is the outcome of psychological complexes of an affective and largely subconscious character; it is the result of multiple tendencies that may come either from heredity or from the milieu in which one lives. Thus, the attitude of a peasant will never be that of a sailor. Likewise, there must be differences of attitude between pupils who have pursued purely scientific, purely literary, or mixed studies. The milieu of the first is the world of extension and number; that of the second is a more spiritual domain, which escapes the tyranny of matter. As for students with a mixed curriculum, they are at home in both milieus. The German secondary schools, with their *Realschule* (modern humanities), *Gymnasium* (classical humanities), and *Realgymnasium* (Latin and sciences), provide us with these three distinct milieus and form students of each type.[13] To discover the attitudinal differences resulting from these three formations and to express them in clear formulas was the goal of the experiment I conducted in Bonn.

2. The Method

Judging that the methods described above had been sufficiently utilized in experimental work, I adopted another, which we might perhaps call "analytic." Its elements are as follows:

a. Analyze the thinking of students from the three different types of curricula, and for that purpose discover their process of reasoning in the following fields: history, philology, psychology, ethics, mathematics, pure logic, sociology, and mechanics. Study also the way they conceive teleology.

13 [In interwar Germany, these three types of secondary schools all led to the *Abitur*, a qualification earned at the end of secondary school but differed in curriculum emphasis. The *Gymnasium* was the most traditional form, centered on classical humanistic studies, with Latin (and usually Greek) as core subjects alongside literature, history, and philosophy. The *Realgymnasium* combined Latin with a stronger weighting toward modern languages, mathematics, and the natural sciences, seeking a more "modern" general education. The *Realschule* omitted the classical languages and stressed mathematics, science, and practical or technical subjects, offering a scientific–utilitarian path to university entrance. For a helpful history on the development of German secondary educational models, see James E. Russel, *German Higher Schools: The History, Organization, and Methods of Secondary Education in Germany* (New York, 1899).]

b. From this, deduce the intellectual approach that is characteristic to each type of formation.
c. Compare these with one another.

3. The Experiment

I chose three large lycées in the same province of Germany. All the students were Catholics. The only difference between the three groups subjected to the experiment was therefore the type of studies pursued. I took only students from the two highest years. The course of studies in the German lycées lasts nine years, and the intellectual level of the final two years is already that of the university.

I had prepared twelve short problems or tests, very simple in appearance but in reality, fairly difficult. Here are a few specimens.

- Psychological thinking test: "Because I am thirsty, I drink. What kind of causality does the *because* express?"
- Aesthetic thinking test: "In all times and in all countries, human beings have made use of rhythm to express their poetic thoughts. How do you explain this coincidence?"
- Ethical thinking test: "It is a fact that among the greatest educators of humanity, some wrote poorly, like Pestalozzi, and others did not write at all, like Socrates and Jesus. How do you explain this?"
- Mathematical thinking test: "Why is the formula $c^2 = a^2 + b^2 - 2ab \cos \gamma$ called the *generalized* theorem of Pythagoras?"

These tests were given to about a hundred students of each of the three types. They did not know the purpose of the experiment. They were to answer in writing.

4. The Result

A. Students of the *Oberrealschule* (science curriculum)

It is interesting to note that this group was the strongest in terms of general intelligence.

- Their capacity of interest was the most restricted; in particular, historical, aesthetic, social, and philosophical questions hardly interested them.
- *They showed a marked tendency to interpret things in a material sense*. Thus, in their explanation of the psychological problem, they spoke of nerves, the brain, the brain as a telephone exchange; they never used the word "soul." In the teleological test, the principle was never formulated in a general and abstract way; it was

> simply stated as a fact. And in explaining this fact, they did not think of a final end; the word "God" never appeared. In the test of pure logic, they expressed their thought in algebraic symbols.

One could have expected these pupils to explain a psychological fact in the language of physics and chemistry, which is familiar to them. But the most interesting finding is this tendency to interpret everything from a material and concrete point of view.

B. Students of the *Gymnasium* (classical curriculum)

- Their capacity for interest was much broader than that of the preceding group.
- They showed a tendency to interpret everything in a spiritual sense, especially in the psychological, teleological, and mechanical tests. In psychology, they spoke of the soul, the will, etc. . . . In the teleological domain, it was the final cause that presented itself to them, God; and the principle was set forth as a general principle. They did not use algebraic formulas to explain a syllogism.

C. Students of the *Realgymnasium* (mixed type: Latin and sciences)

- Their capacity for interest was the broadest.
- The fundamental character of their attitude was plasticity, flexibility. Their interpretation of facts adapted itself fairly well to the material or spiritual nature of the realities they described, though perhaps somewhat superficially.

In conclusion, the general principle that seems to emerge from this experiment is that the intellectual milieu creates a determinate mental attitude. If the milieu is spiritual or spiritualist, the student thinks in a spiritual mode and, what is still more important, even interprets material reality in a spiritual sense. If, on the contrary, the milieu is material, one then thinks in terms of matter and tends to interpret even the spiritual in a material way.[14] If the milieu is mixed, a certain mental flexibility seems to develop. But in this last case—and I underline the point—there is a real danger of forming superficial spirits. It is further noteworthy that these tendencies are entirely subconscious. We are dealing, then, with genuine mental attitudes, chiefly

14 "Accustomed to considering only earthly nourishment as real, it is not healthy to ignore everything that does not stimulate the senses. We confuse the abstract with the spiritual." François Charmot, *L'humanisme et l'humain: Psychologie individuelle et sociale* (Éditions Spes, 1934), 99.

affective and subconscious in nature, deeply rooted in mental life and exerting a marked influence in every domain of the spirit.

II. Habits Developed by Manual Work in Primary School

1. The Problem

A large number of well-known educators (Kerschensteiner, John Dewey, T. P. Ballard, Ferrière), supporters of the *l'école active*,[15] have praised manual work. Much emphasis has been placed on its moral and moralizing influence. It is there, they say, that one truly learns precision, exactness, neatness, diligence, and above all, that is where attention is developed. I wished to verify these claims experimentally.

2. The Method

The method was as simple as it was laborious.

a. I assigned eight primary-school children, thirteen years of age, to five months of manual work.
b. I examined the effects of this work in their school life.

3. The Experiment

The eight children selected attended the schools of Bonn (a city of 90,000 inhabitants). Six of them were bad students—lazy and mean—but nonetheless entirely normal. The other two were "good children," for I did not wish the group to feel it was a collection solely of dunces; that might have discouraged them. The children continued to attend school as usual; but being free every afternoon—as is customary—they then came to the university. They were given a class in manual work, held in the observation room of the laboratory of experimental psychology.[16] A qualified teacher of

15 [On the "active school" (*l'école active*), see Adolphe Ferrière, who in the 1920s popularized the term within the wider "new education" (*éducation nouvelle*) and progressive education movements to designate a child-centered pedagogy that replaces verbalism and passive listening with spontaneous, productive activity. Drawing on the lineage of Rousseau, Pestalozzi, Fröbel, and contemporary reformers such as Dewey, the active school organizes instruction around the child's interests and developmental stages, emphasizes learning through concrete tasks and especially manual work that lead gradually to abstraction, and treats the classroom as a living environment rather than a fixed, teacher-dominated program of lessons. See Adolphe Ferrière, *L'école active*, 2 vols. (Éditions Forum, 1922); and in English, Adolphe Ferrière, *The Activity School*, trans. F. Dean Moore and F. C. Wooton (The John Day Company, 1922).]

16 [Russell provides an account of the manual work at the Stoy School in Jena, Germany, which is described as a *Realschule* boarding school with six levels, after an initial three in the 'lower school.' In his descriptions of the daily life of the

manual training taught the class, while I recorded my observations unseen, behind a special window, transparent on one side and opaque on the other.

In order to analyze the students' attention, I photographed them, without their knowledge, every two minutes. Each day I also examined their manual work to note progress in neatness and exactness. These manual training lessons were given according to the system used in Prussian primary schools.[17] The children came willingly to their work, and we made their stay in the laboratory very pleasant. The conditions were therefore ideal for the formation of habits. The instructor, a young and excellent pedagogue, was known to the children, for he taught in both the schools from which they came. He followed the *école active* system and insisted strongly on neatness and exactness in manual work. I did not ask him to generalize these principles of neatness and exactness, nor did I forbid him to do so. I let him conduct his classes as one ordinarily does in the schools.

4. The Result

a. Attention during manual work, already quite good at the start, became still better over the course of five months. But *this progress had no noticeable effect on attention in the regular school classroom*.
b. Neatness and exactness likewise showed very marked improvement in manual work, but *none at school*.
c. Nevertheless, *both the quantity and the quality of the work produced at school reached a level never before observed in these children*. Their output was ten times greater than in the two previous years.
d. The psychological effect of manual work was as follows:[18]
    - The children's success in manual work made them more aware of their own capacities. Those who up to then had seemed good only at demolishing things found that they had man-

students, he describes how the students' manual training included things such as box-making, bookbinding, wood-carving, and carpentry. This work was held at 7:30pm to 9:00pm on Saturday evenings after supper, and before *Abendlied*, where students would "gather about the piano in the dining-room, and, under the leadership of the head-master's wife, sing the evening song, a single stanza of a well-known hymn." Russell, *German Higher Schools*, 206.]

17 In the primary schools of Prussia, manual training is not obligatory, nor are such courses conducted at Bonn. [On the Prussian school system, see Russell, *German Higher Schools*, 108–37.]

18 I was aided in arriving at this conclusion by the character test prepared by Professor C. Spearman of the University of London. It is the only test so far devised that can be used with any success.

aged to succeed, at least in one domain. This sense of personal strength was transferred to their other studies.

- Close and sustained contact with one teacher changed their attitude toward other teachers and toward school in general. There arose a sense of self-confidence, greater self-respect, and, consequently, a general strengthening of the spirit.
- The development of what one might call a "sense of the value of the self" (*Ich-Wert*) took place by *socializing* the children, *by adapting them better to their school environment.*
- This feeling of personal worth, having a universal influence, explains the improvement in their overall performance.
- These results are corroborated by those obtained at Besford Court, the famous English school for backward children.[19] Its psychotherapeutic method consists in giving students a sense of their possibilities in one particular domain, and then to gradually transfer this sense to other domains that resemble the first.

e. I do not think this experiment proves that general habits cannot be formed on the basis of manual work. But it does seem to me that, with present ordinary methods, if one merely insists on specific ideals (neatness, exactness in manual work) without making them into general ideals, the habit acquired in manual work will remain specific, or will be transferred only to very similar domains, according to the law of affective transfer.

f. As for *attention*, I believe it will hardly become general, even if one generalizes the principle, because *attention is a function of interest*. Now interest, by its very nature—being so affective—is highly concrete and very specific. Only by spurring love can one truly captivate interest.

Psychological Formulas for Intellectual and Moral Formation

1. A habit is formed through the assimilation of a *method* in the intellectual or moral order.

2. The habit thus formed will be specific or general depending on whether the method is specific or general.

19 [The term used here is *enfants arriérés*, which was both a medical and educational classification used to describe children who were deemed to be experiencing intellectual, cognitive, or developmental delays. While the Besford Court in Worcestershire, England, has a long, rich history, it became a Catholic school for special needs children from 1917–96.]

It should be noted that habits of this kind only lead to action if they are associated with a feeling or an ideal. Thus, a convict may be fully proficient in the technique of his work and have formed the habit of doing it but feel no inclination whatsoever to do that work because he has no love for it. This is especially true of purely motor and sensory methods, which reach only the surface of the mind.

3. A habit is also formed by the assimilation of an intellectual or moral *ideal*.

4. The habit thus formed will be specific or general depending on whether the ideal is specific or general.

It should be observed that human beings, and especially children, tend only in a very small proportion (20 percent, perhaps) to generalize a method or an ideal. This tendency to generalization depends on the intelligence of the subject and on the method of teaching.

5. In order to form a habit, the essential thing is not the repetition of an act but the assimilation of a value (moral, intellectual, aesthetic, etc.). Action is, however, a *conditio sine qua non*.

The proof of this principle—which is, in my opinion, the most important of all—is found in all the experiments analyzed above, and especially in those of Knight Dunlap. It follows from this principle that no habit can be formed in an environment that is fundamentally antipathetic, artificial, and incapable of calling forth the immanent forces of the soul. For this interior form, which we call habit, is not the effect of any external constraint; it is the fruit of a free, spontaneous, deliberate act which a person performs because they love and seek to be nourished by the true, the beautiful, the good, and all that is whole and simple as they are. It is the soul, so to speak—and I think this is the true meaning of the Platonic myth—that, finding itself faced with a multitude of possible forms, chooses its own form before living it and assimilating it to itself through action.

The assimilation of a value can take place in two ways:

a. By direct assimilation of an ideal, through meditation or study. As this ideal realizes and begins to take shape, it develops its own method.
b. By the assimilation of a method. Then, if the action does not repel the person performing it, a very strong subconscious affinity for develops little by little in the direction of that action.

One could call these two ways the contemplative and the active. Judging by laboratory experiments—and everyday life proves the same—the contem-

plative method never succeeds without some degree of action, and likewise the active method remains sterile without a minimum of contemplation. There can therefore be no question of divorcing the two ways, but rather of uniting them, with one or the other predominating.

6. The essential task of an educator—who is only a mediator between subject and object—is to unveil the values hidden beneath the different forms of creation. These values are the true, the good, the beautiful, and the vital, which pulsate throughout creation and appear under a particular aspect in the different sciences (literary truth and scientific truth; material unity, biological unity, social unity, moral unity, divine unity, etc.). This particular aspect does not prevent the spirit from rising to the general ideal, which is realized in the Divine Absolute.[20] The educator must also teach the student to model his actions on that type of perfection which makes them true, good, beautiful, and rooted in the social-divine environment in which they flourish.

7. *Among the values that must be instilled in the soul of the young person, the most important is that of the self*. For the self, like the true, the good, the beautiful, and the one, stands above all particular aspects of things. The *self* is realized in all our actions, and a just sense of personal dignity propels one toward perfection in every domain. On the contrary—and this is demonstrated to the point of evidence by Adler's psychology—a sense of worthlessness invites negligence. The reverse of these propositions is also true: success develops a sense of strength, just as failure engenders a feeling of inferiority. Hence, especially in youth, the danger of too frequent failures and the therapeutic effect of success. *Experiments also show that the formation of this just sense of the self can be obtained only in relation to the social environment, and I shall add, the divine.*

8. The educator who wishes to increase the impact of their teaching must *explicitly* show students how the methods they learn in a specific domain can, to some extent, be generalized, and how specific ideals are only one element of the general ideal, which applies to all domains of life.

Thus, mathematical exactness is only one concrete form of a certain kind of truth. Alongside it there is aesthetic, moral, philosophical exactness, etc.

20 "The aim of science is to think God's thoughts after him." (Kepler).

9. A habit, in the sense of attitude defined above, is also formed through the elaboration of affective complexes that create in the subconscious feelings of attraction or repulsion toward certain categories of objects. Hence the need to associate in the child these deep feelings with the noblest ideals and methods.

In the formation of attitudes, the environment seems to play a predominant role. To the results of my first experiment I add the following fact, mentioned by Dr. Burt: [21] criminological studies carried out in Chicago have shown that it is neither race, nor poverty, nor religion, but the environment that is the most important factor in the creation of the criminal type.

10. When an adult or a child is ignorant of something, or does not possess the proper method for investigating a given science, he will interpret that thing according to the knowledge he has acquired in other domains, and will apply to the science he does not know the methods proper to the sciences he does know.

Thus, for a specialist in physiology, all human functions are reduced to conditioned reflexes. The reason is that the physiologist has never come into contact with the human spirit, which finds itself, so to speak, crystallized in philosophy, literature, and history. He then interprets the spirit as best he can—in a mechanical sense.

21 See Cyril Burt, *The Young Delinquent* (University of London Press, [1923] 1931).