

INTRODUCTORY  
PSYCHOLOGY  
FOR TEACHERS

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E. K. STRONG, Jr.

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# Introductory Psychology for Teachers

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TO MY FATHER AND MOTHER



## PREFACE

Certain principles have been established as fundamental to good teaching. Theoretically, all psychologists are agreed that a course of study should proceed from the known to the unknown and from the concrete to the general; that students should learn by doing; that the problem or project method of teaching is superior to memorization of a textbook; that functional not faculty psychology should be taught; that individual differences in students should be taken into account; that a beginning course should be designed for the benefit of the great majority who never go farther; etc.

The aim of this course is to meet these and other ideals of teaching in an introductory course of psychology designed primarily for the use of prospective teachers. Instead of beginning with the most uninteresting phases of psychology and those most unknown to students, the course takes up concrete experiences of everyday life, relates them to the problems of learning and individual differences, and so develops these two topics. Each general principle is discovered by the student out of his own experience in solving specially organized problems. Only after he has done his best is he expected to refer to the text and by then the text is no longer basic but only supplementary, clearing up misunderstandings and broadening the whole viewpoint. Behavior as a whole is considered from the start; gradually it is subdivided and subdivided, so that finally such topics as "memory" or "attention" can be discussed without fixing in the mind of the student the idea that they are separate entities. And in general the course is prepared on the assumption that the majority of students are never going to specialize in psychology and should consequently be given the most interesting and useful facts and principles of psychology, regardless of whether or not they are usually reserved for graduate students.

As the author has planned it, this course is followed by two companion courses. The first covers the general topics of how to remember, how to get attention, economical learning, analysis and reasoning, method of teaching, drill and thought work, development of ideals, how to study, etc. The second course takes up man's instinctive equipment and applies both the instinctive and habitual principles of behavior to social, educational and industrial problems. Following such a broad survey of the most useful phases of psychology, can come the more detailed and systematic study of psychology on the part of students who are genuinely interested and can devote more than a year to the subject.

The course is conducted in a radically different way from prevailing courses. The student is immediately introduced to problems of behavior taken as a whole and only after he is fairly familiar with psychological procedure, terminology and point of view is he given his psychological background. The odd numbered lessons present problems to be solved and the even numbered lessons supply in a general way answers to the problems, together with a broader interpretation of the facts than the average student will discover for himself. For example, Lesson 7 outlines the familiar mirror-drawing experiment. This is performed, say on Monday. That night the experiment is written up and handed in at the class-hour on Tuesday. That hour is devoted to a general discussion of what was discovered in the experiment on the learning process. At the close of the hour Section No. 4 is given the class containing Lessons 8 and 9. The class reads over Lesson 8 on Tuesday evening. At the next class-hour Lesson 9 is taken up in the laboratory in the same way as Lesson 7. Each topic is handled as follows: (1) the student performs an experiment illustrating the principle to be emphasized, (2) he solves the problem as best he can and hands in his report, (3) he has the benefit of a class discussion upon the subject at the next class-hour, (4) he reads over what the author has to say on the subject, (5) he receives back his own corrected paper on the subject, (6) he reviews the subject once about every eight class-periods. All class discussion is based upon the laboratory experiences, not upon the author's presentation of the subject. The latter is only a supplementary aid, to correct misunderstandings and to furnish the student a standard by which to check his own work.

Individual differences are amply provided for in such a procedure. The poor student obtains a concrete grasp of the main points of the course. The able and industrious student adds to this minimum a very much broader and more detailed understanding of the whole subject. The rate of progression is such that even the ablest student realizes that he is not getting all that there is in the course. All are thereby stimulated in a way that is not true when the rate is slow enough to discuss thoroughly every detail mentioned in the text.

The course can be conducted as a 4-hour course over one quarter, or 2 hours over two quarters, or 3 hours over one semester. The laboratory equipment can be supplied for \$100.

The text is printed as a book or in the form of 17 booklets. The advantage of the booklets is to prevent the student reading ahead. This is important as the even numbered lessons contain the answers to most of the problems. Where students read ahead they lose the training resulting from working problems out for themselves. Experience

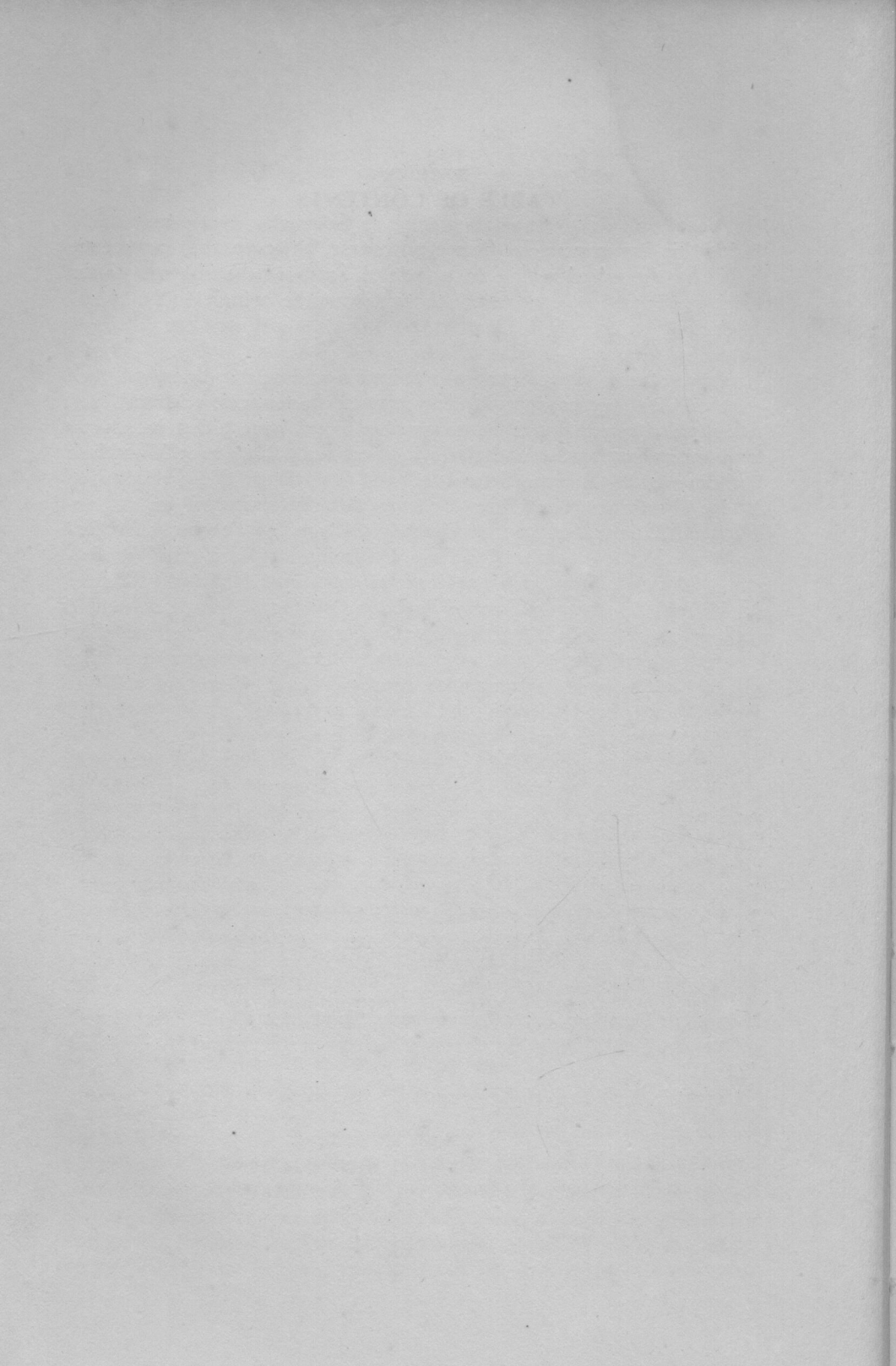
has shown they do about as good work as those who do not read ahead during this first course. In the second course, however, they commence to fall by the wayside, due to a lack of grasp of the subject matter which is secured by students who work out the principles for themselves.

So many have been of general inspiration and help in this work that space will not permit special mention of their services. Several who have used the text in its mimeographed form have aided in a very definite way in revising and clarifying sections. They are: Miss Kate Anthony, State Normal School, Cape Girardeau, Mo.; Professor C. M. Faithful, Tennessee College, Murfreesboro, Tenn.; Professor S. C. Garrison, George Peabody College for Teachers; Professor W. A. McCall, Teachers' College, Columbia University, and Professor J. Roemer, Sam Houston Normal Institute, Huntsville, Texas. Professor Y. Shoninger, George Peabody College for Teachers, helped me very considerably in writing up the description of a "sight-spelling lesson." To all these I owe very much. But I owe most to my wife, who has aided both in matters of expression and of content and has checked tables and "proof read" every new form of the material, whether script, typed or mimeographed or printer's proof.

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## LESSON 1—WHAT IS PSYCHOLOGY?\*

Some of you are doubtless familiar with the story from which the following incident is quoted. But it bears repeating.

Sam had never told his love; he was, in fact, sensitive about it. This meeting with the lady was by chance, and altho it afforded exquisite moments, his heart was beating in an unaccustomed manner, and he was suffering from embarrassment, being at a loss, also, for subjects of conversation. It is, indeed, no easy matter to chat easily with a person, however lovely and beloved, who keeps her face turned the other way, maintains one foot in rapid and continuous motion thru an arc seemingly perilous to her equilibrium, and confines her responses, both affirmative and negative, to "U-huh."

Altogether, Sam was sufficiently nervous without any help from Penrod, and it was with pure horror that he heard his own name and Mabel's shrieked upon the ambient air with viperish insinuations.

"Sam-my and May-bull! Oh, Oh!"

Sam started violently. Mabel ceased to swing her foot, and both encarnadined, looked up and down and everywhere for the invisible but well-known owner of that voice. It came again, in taunting mockery.

"Sammy's mad, and I am glad,  
And I know what will please him,  
A bottle of wine to make him shine,  
And Mabel Rorebeck to squeeze him!"

"Fresh old thing!" said Miss Rorebeck, becoming articulate. And, unreasonably including Sam in her indignation, she tossed her head at him with an unmistakable effect of scorn. She began to walk away.

"Well, Mabel," said Sam plaintively, following, "it ain't my fault. I didn't do anything. It's Penrod."

"I don't care—" she began pettishly, when the viperish voice was again lifted.

\*The relationship between class-room work and assignments will be shown in each Section by an outline, as follows:

CLASS HOUR	IN CLASS	WRITE-UP	READ
1	Introduction		Lesson 1
2	Discuss Lesson 1		Lesson 2
3	Visit 1st Grade	Lesson 3	

"Oh, oh, oh!  
Who's your beau?  
Guess I know:  
Mabel and Sammy, oh, oh, oh!  
I caught you!"

Then Mabel did one of those things which eternally perplex the slower sex. She deliberately made a face, not at the tree behind which Penrod was lurking but at the innocent and heartwung Sam. "You needn't come limpin' after me, Sam Williams!" she said, tho Sam was approaching upon two perfectly sound legs. And then she ran away at the top of her speed.

"Run, nigger, run—" Penrod began inexcusably. But Sam cut the persecutions short at this point. Stung to fury, he charged upon the sheltering tree in the Schofield's yard.\*

Why is it that this account is interesting to us? Why did Sam and Mabel enjoy being together? Why were they so nervous and uneasy? Why did Penrod call out as he did? Why did Mabel get mad at Sam? Why did she run away? Why did Sam get mad? What happened when Sam reached Penrod?

At this point some of my students have seemed to stop and, with lifted eyebrows, to question silently, "Is this a game of twenty questions? and twenty foolish questions at that? Can this be psychology?"

It is. All these questions are real psychological problems, quite as pertinent to the science of psychology as the dignified and dry-as-dust queries you doubtless expected.

What then is psychology?

In commencing any new course of study it is necessary to have some idea of what the whole thing is about. At the same time it is extremely difficult to obtain a clear notion since most of the details are unknown to the beginner. It is only after one has experienced details that he is in a position to understand any summary of them. Consequently the following definition is just to aid the student in orienting himself. Only toward the end of the course will he be prepared to grasp its full meaning.

Psychology may best be defined as the science of behavior.

There is the definition. The matters dealt with in the next ten sections will give some of the various fields included in its bounds.

(1) A crowd surrounded the automobile of Dr. John Linder of 1509 Eastern Parkway, Brooklyn, yesterday, when the physician stopped at Glenmore and Vesta Avenues after a dog had dodged beneath the auto's wheels and had been killed. There were men and

\*Booth Tarkington—"Penrod and Sam," 1916, pp. 220-222.

women in the throng and they seemed to think that the physician had not tried to avoid the dog.

Dr. Linder endeavored to explain that the most expert of motorists could not have dodged the dog, which ran barking beside the wheels of his auto and finally slipped under them. The crowd muttered angrily about motorists who had no thought for human lives, let alone the life of a dog, and Dr. Linder, realizing that the crowd soon might become dangerous, tried to start his car.

His action aroused several men in the crowd who had been working themselves into a fury, and one of them struck out at the doctor with his fist. The physician ducked, and reaching in his pocket, jerked out a glittering object of nickel which he thrust into his assailant's face, exclaiming:—

"Stand off. Get back from this car. I'll shoot the first man who interferes with me."

The man who had struck at the physician, with all the rest of the crowd, fell back hastily, and Dr. Linder, seizing the opportunity, applied the power to his car and slipped away. John Cargill, a blacksmith of the neighborhood, noted the number of the doctor's car, however, and hurried to the New Jersey Avenue Court where he got a summons for the physician, calling on him to show cause why he shouldn't be punished for violation of the Sullivan Law against carrying weapons. The physician had scarcely arrived at his home when the summons was served and he hurried back to court in his automobile.

Cargill was present and Dr. Linder, after explaining the accident to Magistrate Naumer, declared that Cargill had been particularly aggressive.

"He had a mob at his back," said the doctor, "and I was really afraid they would attack me."

"But your revolver?" questioned Magistrate Naumer. "Do you not know that under the present law you may not carry a weapon without a permit?"

"Why, I only threatened the crowd with this," replied the physician as he pulled something from his pocket and snapped it into the Magistrate's face. There was a small report, and Magistrate Naumer clutched spasmodically at the desk in front of him. Then he burst into a laugh as he observed the glittering nickel cigar lighter which Dr. Linder held in his hand.

Dr. Linder would not make a charge against Cargill, and the smith hurried out of the courtroom to the accompaniment of laughter in which every one joined.\*

\*New York Times, 1911.



Why should a crowd become angry because a dog had been killed? Would Cargill have become as angry if he had been alone as he did when surrounded by a crowd? Why did the crowd think Dr. Linder had a gun? Why did Cargill want the doctor arrested? Why did the crowd in the courtroom all laugh at Cargill? Why have you also enjoyed Cargill's discomfiture?

(2) A frequent sight is that of little boys fighting. Why do they like to fight? Why does a woman want to stop them fighting? Why will men pay half a million dollars to sit in the broiling sun and see a prize fight?

(3) Consider any advertisement before you. What situation is depicted? Does it in any way express your feelings? Could the advertisement be changed so that it would present a situation that would make you really want the commodity advertised?

(4) Consider the following cases:—

(1) A college professor discovers that a wealthy old bachelor keeps a large amount of money hidden in his house. After weeks of clever work he discovers where this money is kept and finally obtains a pass key. One night he enters the house, secures the money and on being discovered by the bachelor, kills him.

(2) A young man by the name of Black from a prominent family is engaged to marry Miss Smith. Mr. Jones, altho knowing of the engagement, deliberately makes love to Miss Smith and eventually supplants Black. When Black discovers the fact, in a fury of rage, he kills Jones.

(3) C is attacked by a burglar in his own home and after a struggle, kills the burglar.

(4) D recklessly drives his auto thru the streets of a village and kills a young boy.

(5) E attacks two little boys in the woods and after torturing them for sometime, finally cuts one of them to pieces with a razor.

In these five cases a man has killed another human being. Each is a murderer. Why shouldn't all be hung for their crime? Your answer, of course, is that the circumstances are different. Can we conclude that the five men are different sorts of men on the basis of the circumstances which are presented? How can we evaluate their conduct? in terms of their action, or in terms of the situations which confronted them, or in terms of both situation and response?

(5) All respectable school teachers spend some time every year condemning prize fights, bull fights, gambling, drinking, etc.

Especially is this true of women teachers. Yet two of my acquaintances when visiting the exposition at San Diego several years ago, rode down to Tia Juana, in Mexico, and very much enjoyed a prize fight, lost a quarter at each of the gambling tables in the "joint" there, and afterwards loudly berated their fate because they arrived too late for the bull-fight. Is it conceivable that the difference in the situations which confront them at home, in the school, or at Tia Juana, is responsible for strong condemnation of a prize fight in one place and attendance at and enjoyment of one in another place?

Do you think it possible to set down all the details making up the situation which confronts one and then to record the response made to this complex situation? If we knew all the details would we be able to prophesy what a person would do? Cannot I be certain that you will say to yourself "7" and then "cat" after reading the next two sentences? What does 3 and 4 make? What does c-a-t spell?

(6) A man, walking with a friend in the neighborhood of a country village, suddenly expressed extreme irritation concerning the church bells, which happened to be pealing at the moment. He maintained that their tone was intrinsically unpleasant, their harmony ugly, and the total effect altogether disagreeable. The friend was astonished, for the bells in question were famous for their singular beauty. He endeavored, therefore, to elucidate the real cause underlying his companion's attitude. Skilful questioning elicited the further remark that not only were the bells unpleasant but that the clergyman of the church wrote extremely bad poetry. The causal "complex" was then apparent, for the man whose ears had been offended by the bells also wrote poetry, and in a recent criticism his work had been compared very unfavorably with that of the clergyman. The "rivalry-complex" thus engendered had expressed itself indirectly by an unjustifiable denunciation of the innocent church bells. The direct expression would, of course, have been abuse of the clergyman himself or of his works.

It will be observed that, without the subsequent analysis, the behaviour of the man would have appeared inexplicable, or at best ascribable to "bad temper," "irritability," or some other not very satisfying reason. Most cases where sudden passion over some trifle is witnessed may be explained along similar lines, and demonstrated to be the effect of some other and quite adequate cause. The apparently incomprehensible reaction is then seen to be the natural resultant of perfectly definite antecedents.\*

\*B. Hart, *The Psychology of Insanity*, 1912, p. 73-74.

Did you ever "fly off the handle" at a perfectly innocent person? Have you ever ridiculed a person's clothes when the only trouble with the clothes was that the wearer had beaten you out in an examination? If your friends were aware of one or more of such complexes, as Hart has described above, would it help them in understanding your conduct? Would it help them to prophesy what you would do next?

(7) Now I want to be a nice, accommodating patient; anything from sewing on a button, mending a net, or scrubbing the floor, or making a bed. I am a jack-of-all-trades and master of none! (Laughs; notices nurse.) But I don't like women to wait on me when I am in bed; I am modest; this all goes because I want to get married again. Oh, I am quite a talker; I work for a New York talking machine company. You are a physician, but I don't think you are much of a lawyer, are you? I demand that you send for a lawyer. I want him to take evidence. By God in Heaven, my Saviour, I will make somebody sweat! I worked by the sweat of my brow. (Notices money on the table.) A quarter; twenty-five cents. IN GOD we trust; United States of America; Army and Navy Forever!""

The preceding paragraph and the one that follows are verbatim copies of the remarks of two different individuals. The former is that of a maniac and illustrates what is called "flight of ideas"; the latter is that of a dementia præcox patient and illustrates "incoherent speech."

"What liver and bacon is I don't know. You are a spare; the spare; that's all. It is Aunt Mary. Is it Aunt Mary? Would you look at the thing? What would you think? Cold cream. That's all. Well, I thought a comediata. Don't worry about a comediata. You write, he is writing. Shouldn't write. That's all. I'll bet you have a lump on your back. That's all. I looked out the window and I didn't know what underground announcements are. My husband had to take dogs for a fit of sickness.\*\*

Offhand one wouldn't say that there was any order or system to these two paragraphs, particularly the second one. And experts have more or less held that view until recently, when careful study commenced to show that there were rules and principles underlying even the ravings of the insane. Some day these will be as thoroughly understood as are physical and chemical laws today.

(8) Beliefs have been held as peculiarly one's own, and so intangible that no one until recently has dreamed of measuring them.

\*J. R. deFursac, *Manual of Psychiatry*, translated by A. J. Rosanoff, 1908, p. 71.

\*\*J. R. deFursac, *op. cit.*, page 72.



Yet below there are given nine beliefs making up a sort of scale extending from absolute belief (100) thru doubt (0) to absolute disbelief (-100). This scale is very imperfect, being based on but a limited number of men and women, but it illustrates what can be done along the line of measuring intangible things.

2 plus 2 equals 4.	99
There exists an all wise Creator of the world	73
A house-fly has six feet	47
The most honest man I know will be honest ten years from now.	21
"Blessed are the meek for they shall inherit the earth."	-2
Magna Charta was signed in 1512.	-22
"It never rains but it pours."	-53
"Only the good die young."	-74
2 plus 4 equals 7.	-99

If one wishes to determine, for example, how strongly he believes that "dark-haired girls are prettier than light-haired ones," he can compare it with those statements above and so obtain a rating for it. The writer cannot comprehend why the average man should rate this belief half-way between the fifth and sixth beliefs on the "scale," and the average woman half-way between the sixth and seventh. But they do.

(9) From the New York Times of about May 1, 1914, is quoted the following editorial comment on an article by a Superintendent of a Connecticut brass works which appeared in *The Iron Age*.

At these works there was recently constructed a long incline up which heavy loads were to be wheeled in barrows, and premiums were offered to the men who did or exceeded a certain amount of this labor. They attempted it vigorously, but none succeeded in earning any of the extra money, instead they all fell considerably below the fixed task.

Prompt investigation by an expert disclosed that the trouble lay in the fact that the men were working without sufficiently frequent periods of rest. Thereupon a foreman was stationed by a clock, and every twelve minutes he blew a whistle. At the sound every barrowman stopped where he was, sat down on his barrow, and rested for three minutes. The first hour after that was done showed a remarkable change for the better in accomplishment; the second day the men all made a premium allowance by doing more than what had been too much; and on the third day the minimum compensation had risen, on the average, 40 per cent, with no complaints of over-driving from any of the force.