PSYCHOLOGY AND THE WAR
Emergency Stimulates Practical Work and Application of Science Rather Than
Development of Theory—New Views of War—Probable Changes in
American Institutions—Need for More Research on
Man's Inherent Traits

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ASH as it may seem to draw any
lesson as yet from the present
war, in which the great Nordic
race which embraces the domi-
nant elements in all the belligerent
nations is committing suicide, the
following points, which can be only
hinted at in my twenty minutes, seem
to me worthy of consideration here.

Mr. Hafner, through whom most of
us receive our foreign periodicals, writes,
"About one thousand French and
German scientific publications have
suspended as a result of the war, and
about half of those that remain have
been issued less frequently or in reduced
size." They have also suffered in
quality because so many collaborators
doing the best work have been sent
to the front, and many of them wounded
or killed. About all the research being
now carried on is in the medical field
and in hospitals. Since April last,
practically all continental publications
have been kept out of this country.
This affects not only our journal clubs
but cuts off from us the stimulus of
European thought, so that we are now
the only great country in the world
where research can go on as before.

Last month I asked and obtained the
responses of representative authorities
of all the twenty-four universities in
the American Association concerning
this situation. The responses were
very diverse. One prominent university
president amplified the view that it
was high time and would do good for
America to be weaned from its European
alma mater. Another held that the
cessation of importation of intellectual
goods made in Europe would cause the
culture level not only in academic
departments but throughout the world
to sink to a lower level. Most, however,
held that this shortage will be a new and
serious responsibility upon American
scholars to make it good, that the present
situation is a loud, clear call to
independence, an opportunity for new
leadership, that it should result in
higher standards of originality and
in increased output of investigation, that
the war opens opportunities to American
universities as great as it has afforded
to certain industries here, and that
we should emulate the latter in devising
new methods and in vastly enhancing
output. If we only have the vision,
the war will bring here a great advance
in culture. The new Research Council
of the National Academy and the
Committee of One Hundred, with their
splendid if, as yet, unrealized program,
indicate that we are at least making a
feeble beginning to respond to the
situation. A vast deal has been said
and written about research here within
the last eighteen months, and there is
every prospect that it will have at least
enough, let us hope not too much,
organization.

AMERICAN PSYCHOLOGISTS LEAD
As for psychology, whether we regard
the quality or quantity of work done
here in every field, all the way from
introspection to behaviorism, including
the study of animals, children, normal
and subnormal, anthropology, especially
as represented by our Bureau of Ethnol-
ogy, the work in tests, scales, in stand-

1 This address was prepared for the twenty-fifth anniversary of the American Psychological
Association, New York, December, 1916, and is reprinted from the first issue of Dr. Hall's inter-
esting publication, the Journal of Applied Psychology (March, 1917).
ards, and, indeed in about every domain of psychology (unless we except psychiatry, where most work worth while that has been done has been inspired either by Kraepelin or more lately by Freud), I believe we are quite ready to meet this call in the field of both pure and applied psychology, provided only we escape the obsession of finality in either method or result and realize that psychology is just beginning, the best things are yet to be found out, and that its difficulties and obscurities are the twilight of dawn and not that of evening.

2. Another effect of the war upon psychology that now seems probable is to lay stress upon applied as distinct from pure aspects of research. For two and a half years, practically all the leaders in most of the physical sciences, particularly physics and chemistry, have ceased to advance their science as such and have been absorbed in making it immediately serviceable; while even in the most humanistic fields culture has yielded to Kultur. The criterion of values in science is now what it can do pragmatically, in the Vaihinger sense. Talent of the order of Edison or Burbank has taken precedence over that of men like Helmholtz and Weismann, and the work of the latter is transvalued by the test of utility. The war has given the world its greatest lesson in scientific efficiency. Just as Russia in the war with Japan did not begin to realize how far the latter country had moulled all its pre-Meiji, and indeed all liberal culture, and focussed its entire energy upon practical efficiency, so none of the Entente Allies, least of all England, realized how far Germany had gone in casting off the culture of half a century ago, and in almost a single generation acquiring a new soul that made it, instead of the least, the most hard-headed, practically effective nation the world has ever seen, with hardly a vestige of the old, speculative, sentimental traits of the days before 1870. As pure chemistry failed to appreciate the value of the formula for making nitrate, which Germany had secretly bought from its Norse discoverer, and which enabled it to produce 300,000 tons of ammunitions during the first year of the war, at one-third its cost to the Allies, so its tests of the senses, motility, fatigue; its establishment of distinct digestive, respiratory, muscular, and nervous types; its temibility tests, which eliminate from the ranks both on donning the uniform and after every wound, thereby greatly reducing liabilities to panic; the French tests and assignment of men to infantry, cavalry, artillery, aviation corps, etc., according to the standard types of McAuliffe, Segaud, Thorris and Sorel, have shown how immediately serviceable psychology could be made in a new field. Already enough of the carefully guarded military secrets of these tests for specific lines of military service have leaked out to suggest why the German and French armies are so much more effectively organized than the English and Russian, and to show that applied psychology can render the most valuable service. We see with mingled admiration and dismay to what lengths Germany will go in applying all the latest knowledge in every field, not only in industry, but municipal and social organization, and even in eugenics, in ways often far beyond the reaches of the old morality.

THE STUDY OF HUMAN NATURE

Corporation schools, which here in the last four years have come to represent the advanced line of vocational discrimination and guidance, have already demanded of psychology vastly more knowledge of character and its traits than it has yet attained; and this has led, as we all know, to very many tables of human qualities, that are, some more, some less scientific, and premature, so that we can only very imperfectly and tentatively answer all the questions that business is now putting to us. So the war has still more urgently called upon psychology to do things it was not ready for, which had to be done extemporarily and as best they could by intuition. In both fields the call is so loud and insistent that it seems to me every psychologist should be able to give some reason if he does not do what in him lies to a better knowledge of man and life under
modern conditions, even if he has to break in some degree from his own lines of work, in order to help in the supreme problem of diagnosing each individual, and steering him toward his fittest place, which is really the culminating problem of efficiency, because human capacities are after all the chief national resources. In conning only a few of the some three thousand books and pamphlets on the war our library has made a specialty of collecting, only one topic has impressed me more than the literature that enumerates the various things which psychology is doing or can do, not only for war itself, but for the new social and industrial order which characterizes the state of a nation in war. Must we not, therefore, infer that such facts as these suggest that we readjust the old differentiation between pure and applied psychology, and realize that research in the latter field may be just as scientific as in any other, and that the immediate utility of our results is at least no longer a brand of scientific inferiority?

A NEW LIFE

Second comes the parting from home and loved ones; the donning of the uniform and with it the *esprit de corps* of the Army; the intense activity of the training camp; the remarkable development of powers of effort and of endurance, which makes each often a marvel to himself, a power by which those from sedentary life often excel laborers and peasants; the games, songs, theatricals, often camp newspapers, in which phenomena we see instinct seeking to compensate, in Adler's sense, for a deeper but repressed anxiety. Life at this stage is so absorbing that the old life at home pales, and loved ones are thought of with surprising infrequency, and it becomes harder to write to them; the sudden setting up, physical and often moral, of flabby individuals, to sleeplessness, heat, cold and hunger, as the individual learns to draw upon his phyletic reserve, and is often surprised to find the largest drafts upon it honored.

Third, in the advance into the trenches, where silence and immobility are often necessary under the greatest excitement, breaking down many a nervous system, and when everything else, past and future, is forgotten in the struggle for present safety and physical comfort, the long confinement and constrained positions interspersed with digging, bailing water, with sometimes personal draftings to carry despatches or rescue wounded friends from the "hell-strip" between the most advanced opposing lines, the acute attention to the sound of projectiles and their explosion, it is no wonder that some grow mad and rush wildly at the enemy and to certain death, or else back to safety, while those with stronger nerves develop with amazing suddenness a callousness to danger, fatigue, hunger, discomforts, while we sometimes have the unique reaction of
sudden fraternization with the enemy which Kreisler has so well described.

Fourth, when the charge is called, some drop, fatigued and perhaps dead from exhaustion, while others who thought themselves spent marvel at the sudden development of utterly unexpected resources in their own systems. Here each faces his man intent only upon killing him and escaping from being killed himself. When this is all over the survivors frequently, and sometimes for days and weeks, live in an illusion that the charge is still on, and they cut, slash, stab imaginary enemies, while the same obsessions haunt their sleep, so that even the hospitals, a few days after the battle, are noisy with the imagined battle which still rages in the soul. Those who have once had this experience, too, we are told, should recover within the hearing of the big guns, lest these obsessions undermine their courage and make them cowards and panic-starters despite their will. Only very slowly do even the sanest come back to full realization of what and where they are, what doing, and only gradually do their friends, relatives and home conditions live again in their souls as the past validates itself in the all-absorbing present.

THE STRAIN OF WAR

Such, too, is the unprecedented strain of the present war, with its high explosives, the contractions of both time and space, poisoned gases, the fatigue and demoralization deliberately planned by each enemy by continuous day and night bombardment before the infantry advance, that it is no wonder that each belligerent has to develop a new type of hospital for cases of shock due to these causes. All agree that the nervous system of the belligerents has never been subjected to such a strain, and many hold that this of itself will impair the quality of parent-hood perhaps for generations. War is a grim and awful experiment upon human nature, but like vivisection, disease and insanity, it should be studied intensively to find its nature, cause, and, if possible, its cure and at least its function for the individual and society. The very voluminous data in this field now fairly cry out for more and better interpretation. Raw instinct, feeling and emotion, which are the very roots of human nature, are stripped bare of all their disguises. The motivation of war, however interpreted, is psychological, whether its cause be individual, social, economic, or religious. War is still regarded too much as panics and pestilences were before science explained and controlled them. Hence it is that we should welcome the suggestion lately made of a society planned, to be given an international organization, to study the psychological aspects of this war, selecting literature, making special observations, according to prescribed methods, synthesizing results from all fields, in order that in the end we may have some definite conception of what war really is, does and means. At least the vastness and abundance of the data should not cause them to be neglected, seem common or go to waste.

4. Will the war tend to increase collectivism at the expense of individual activity and initiative? It stands forth already as the most perfect example the world has ever seen of completely organized teamwork. The individual is only a cog in a vast machine. The subaltern and even the lower officer knows almost nothing, and indeed one high authority has told us that only three men in one of the leading belligerent countries know anything in regard to the general military plan; and very few attempt to understand what is going on in other parts of the line in any front. The rest obey literally, trusting in the wisdom at the top. They do much and perhaps have to face almost certain death in an enterprise that seems to them utter folly, and they have no consolation save their faith that the leaders know it to be for the good of the whole. This is necessary for all effective armies, but in citizens of an autocratic government it comes easier and is more complete than in those pervaded by the spirit of democracy.

This, of course, is one of the reasons why wars always favor autocratic, and are unfavorable to democratic, institu-
tions. This concentration of power often includes the civic community, commandeered, while personal liberty suffers from countless encroachments. So mechanized is war today that there is ever less opportunity for brilliant coups, acts of self-initiated heroism and daring. So, too, the esprit de corps of the Army is strong and rigid in enforcing its collective judgment and sentiment, while, if internationalism declines, patriotic and perhaps fanatical nationalism is incalculably strengthened. Thus it is no wonder that when soldiers are at last discharged and go back to civil and industrial life, they find it hard to readjust. They have lost positions to others who have gained while they have declined in aptness for their old jobs. Instead of the closer tie of companionship in arms there remains only that of fellow-citizens. They have grown used to taking orders, to being fed, clothed, cared for, and so find it hard to return to doing these things for themselves, and expect government consideration in the form of pensions, offices and other favors. They lean on the state that they have served, instead of learning to exercise their own individual powers. In all these ways war is unfavorable to the spirit of democracy and more favorable to monarchical tendencies. A few new and powerful leaders arise because a few men have learned to exercise command, while the masses have learned to obey. War is as necessary for monarchy as peace is for democracy. One over-emphasizes order, system, control; the other magnifies beyond bounds unrestrained personal liberty. Here is the issue of the present struggle. Germany never had a revolution such as in England and in France swept away the spirit and even the vestiges of feudalism, which Teutonic genius has conserved and transformed into something which at least the neutral world must admire. The least governed people can perhaps best understand the most governed, and yet here our psychology fails to recognize the fact that it is prepersonalities that have made history, and that it is their synthetic organization, one with another, that has created civilization and culture, and that if these elements or units in the body politic, social and industrial, have their freedom repressed according to any wisdom the wit of man has yet devised, the whole of which they are members is sure, sooner or later, to lose the all-originating power of free and progressive development. Despite the penalties of freedom, such as license, sometimes degenerating to vice and crime, despite disorder, crude, often unsuccessfully and at best oft-repeated trial and error methods, if we believe in man and in a future that is to be greater than the present, we must believe that the American way will lead mankind to an ever higher goal of evolution and emancipation from the countless repressions that dwarf and stunt him in the home, the school, church, industry and state. The German superman is for the people an iridescent dream evolved in order to compensate for the fact of over-institutionalized life, and even the superstate there is the state that now is, while our superman and state is that which is to be when freedom has done its perfect work.

NEED FOR STUDY OF MAN

Finally, in view of all this, should we not in this country, along with all our other psychologizing, foster as something especially germane to the spirit of our institutions the study of individualities and racial and all the other very diversified groups which constitute our heterogeneous population, and do so not only for the development of anthropological science, but with the ideal of fitting each one's aptitudes of body, health, native gifts, traits of character, experiences and motor patterns, to just that occupation that best fits his own psychophysic organism, striving to guide each to that environment, industrial, social or cultural, in which his personality will find most incitement to unfold freely? Should not one of our ideals be to give each the kind and degree of self-knowledge that will make not only for maximal self-reverence and self-control, but for maximal freedom and the most efficient life? If a democracy achieves greatness
it must be not by the method of regimentation or any kind of organization imposed from without, but by finding the place in life for which each is best fitted. Must we not study individuals more than we study vocations, and thus perhaps some day may not the very apex of democratic society be found in its psychology, charged with the responsibility of seeing to it that the best powers of every man are discovered, developed, and put to their highest use?

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**Women's Separate Colleges Are Losing Ground**

As the marriage rate of graduates of women's separate colleges is uniformly very low, it is interesting to the eugenist to note that colleges of this type are not holding their own, of recent years. "Fortunately," says Roswell H. Johnson ("School and Society," 1917, p. 679), "the percentage of women attending coeducational colleges is growing very rapidly. From 1895 to 1902 the number of students in separate colleges for women increased from 14,049 to 15,544, while the attendance of women in coeducational colleges increased from 13,940 to 23,216. If we exclude Roman Catholic colleges, the percentage of coeducational colleges grew from 30% in 1870 to 72% in 1902. These figures may be in part owing to the attitude indicated by graduates of separate colleges whom I have heard deplore the separateness."

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**Money Not Enough to Save Child Lives**

The payment of maternity insurance or benefits has often been mentioned as an effective way of decreasing infant mortality. Such payments are now made in Great Britain but the London *New Statesman*, reviewing recent statistical reports, says that while they have made the price of midwifery go up, they have not had any effect on the infant mortality. This has, indeed, decreased during the war, but it is declared that no connection appears between infant deaths and the payment to poor mothers of sufficient money to meet the expenses of confinement. The *New Statesman* thinks the infant mortality is most closely related to overcrowding. It is quite likely, however, that this is merely symptomatic, and that the fundamental cause of the infant mortality is in a majority of cases inherited weakness.

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**A Decrease in American Intelligence**

Possibility of a slow fall in the average intelligence of American towns appears from a study made by Prof. Rudolf Pintner ("School and Society," 1917, p. 597). He reports on a survey made of a town in the middle west (presumably Ohio), with 913 inhabitants. There were 154 children in the grade schools and all of these were examined by means of mental tests. Only one very bright child was discovered; there were 94 with a mental index below 50 and 60 who were at 50 or above. The average mentality of American children of corresponding ages is 50. The median of all the children tested was 40, an indication that they are below the average. It is significant that the American population of the town was found to be steadily decreasing, through race-suicide, while the brighter high school graduates usually leave town in search of greater opportunities. The town, therefore, deteriorates each year, in the average of intelligence—a deterioration which many eugenists think would be shown, in a less degree, could the necessary measurements be made of the mentality of the nation's entire population.