

باب الكتب الجديدة

« المدخل الى دراسة التوجيه المهني » سنة ١٩٤٦

Andrée Courthial: "Introduction à l'étude de l'Orientation Professionnelle." Bloud & Gay, 1946

هذا كتاب حديث يتضمن عرضاً شاملاً لمسألة التوجيه المهني من جميع نواحيها . والكتاب مقسم إلى بابين كبيرين : أحدهما يعرض للمسألة من الناحية الاجتماعية ، والآخر يعرض لها من الناحية السيكولوجية . وقد تناولت المؤلفة بالبحث الأسس الاجتماعية للتوجيه المهني ، فأظهرتنا على أن للمسألة طابعاً اجتماعياً يدخلها في نطاق العلوم الاجتماعية التي ترمى إلى تحقيق خير الفرد والمجتمع معاً — وقد اهتمت المؤلفة بأن تحدد مهمة كل من الأسرة والمدرسة والطبيب ورجال الأعمال ومكاتب الخدمة الاجتماعية في دائرة التوجيه المهني ، فبينت بكل وضوح أنه لا بد من تضافر سائر القوى من أجل العمل على توجيه المراهقين توجيهاً مهنيّاً ملائماً .

أما في الباب الثاني من الكتاب فقد أسهبت المؤلفة في عرض خلاصة وافية لاختبارات الذكاء ، وبخاصة اختبار ألفريد بينيه ، والاختبار المعروف باسم ترمان وبينيه . ثم عكبت المؤلفة على هذه الاختبارات بنظرة نقدية حاولت أن تبين فيها ما لهذه الاختبارات من قيمة في تحديد الاستعدادات الفردية . وبعد ذلك تناولت بالبحث مسألة الاستعدادات الفنية واليدوية ، كما عرضت لدراسة الميول والأذواق والأمزجة ، وأردفت كل هذا بدراسة بعض الحالات الخاصة ، مع بعض الرسوم البيانية الدقيقة .

والكتاب ينطوي على كثير من الإحصاءات الدقيقة ، ولكنه لا يخلو من نزعة تبسيطية تجعله في متناول الجمهور . فنحن هنا بإزاء رسالة شاملة تقدم لنا فكرة واضحة عن حقيقة التوجيه المهني الذي طالما حمل عليه الكثيرون ممن لم يفهموه على حقيقته . وعلى كل حال ، فإن مؤلفة هذا الكتاب قد استطاعت أن تخرج بالتوجيه المهني من مجاله العلمي النظري إلى المجال العملي الحيوي . ولسنا نغني أن الكتاب

يخلو من أسس علمية خالصة ، وإنما نعى أنه يمس كثيراً من الجوانب العملية التي تجعل من التوجيه المهني دراسة حية ترتبط بالتجربة الإنسانية والواقع العملي . وعلى الرغم من كثرة المؤلفات الحديثة في التوجيه المهني ، فإن كتابنا هذا يعد في مقدمة الكتب الواضحة التي تقدم للقارئ فكرة صحيحة عن التوجيه المهني على وجه العموم .

ذكرها إبراهيم

مذكرات توجيهية في تاريخ الفلسفة للأستاذ ماهر كامل مدرس الفلسفة بمدرسة المنصورة الثانوية - ٨٦ صفحة - ١٩٤٨ .

كتاب يفي تماماً بالغرض الذي وضع من أجله إذ أنه يقدم بصورة واضحة مختصرة مقرر تاريخ الفلسفة لطلبة السنة الخامسة التوجيهية ، شعبة الآداب . واستخدم المؤلف وسائل التوضيح الملائمة لهذه المادة مثل الجداول للمقارنة بين المذاهب وتلخيص النظريات الفلسفية الرئيسية . وقد استخدم طريقة السؤال والجواب مهتدياً بالأسئلة التي وردت في الامتحانات الرسمية . وليس غرض الكتاب أن يغني عن الرجوع إلى الكتب المفصلة في تاريخ الفلسفة ولكنه سيساعد الطلبة على تكوين فكرة واضحة عن أهم النظريات الفلسفية وعلى مراجعة المقرر بسرعة استعداداً للامتحان .

ي . م .

مجلة المعلم العربي

تلقينا بمزيد الشكر والاعتباط العدد الأول من مجلة المعلم العربي وهي مجلة شهرية تربوية ثقافية تصدرها وزارة المعارف السورية ورئيس لجنة التحرير الدكتور جميل صليبا . وغاية هذه المجلة ، كما جاء في الكلمة الافتتاحية : « أن تكون أداة لتبادل الرأي بين المعلمين في شئون مهنتهم ، ووسيلة لإخراجهم من العزلة الفكرية التي يعيشون فيها . فقد كان المعلمون يعيشون حتى الآن في عزلة تامة لا يطلع أحدهم على آراء زملائه إلا من خلال أحاديثهم المبددة ، أو عن طريق ما يكتبونه في بعض الصحف العامة من الآراء المتباينة . وكانت هذه العزلة تولد الفتنور والملل في نفوس المعلمين ، وتعودهم العمل الآلي وتزيد في تشاؤمهم » . ويذكر الدكتور جميل صليبا في كلمته المحلات التربوية التي صدرت في سوريا بين ١٩٣١ و ١٩٤٦ والتي

اضطرت إلى أن تحتجب « تاركة في نفوس أصحابها أسفاً عميقاً ، مشبعاً بالشك والأمل والألم . والسبب في قصر حياة هذه المجلات لا يرجع إلى فقدان المثل العليا ونقص الحماسة والتضحية والإخلاص ، وإنما يرجع بالدرجة الأولى إلى اعتماد هذه المجلات على الجهود الفردية المبددة وعجزها عن القيام بجميع نفعاتها » .

إننا نهنئ المشرفين على توجيه سياسة وزارة المعارف السورية أصدق تهنئة على هذه الروح التعاونية الجميلة التي تتجلى في مرسوم إنشاء المجلة وخلال مقالاتها القيمة . ولا نشك في أن زميلتنا الغراء ستنجح في تحطيم العقبات الكثيرة — الظاهرة منها والخفية — التي تعترض سير المجلات العلمية في الشرق العربي ، وأنها ستتمو وتزدهر مقدمة لأجيال عديدة من المعلمين أجل الخدمات .

ونحن إذ يسرنا أن نبدي عظيم فرحنا بظهور مجلة المعلم العربي — كما سبق أن أبدينا إعجابنا بمجلة « المعلم الجديد » التي تصدرها منذ إحدى عشرة سنة وزارة المعارف العراقية — نزداد إدراكاً بأن تشجيع المجلات العلمية لا يمكن أن يكون قاصراً على الابتسامات الرقيقة أو العريضة مهما انطوت عليه من العطف وما إليه . . .

ى . م .

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الكتب المهداة إلى المجلة

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الخامسة عشرة - يناير ١٩٤٨ - وما يسترعى النظر في هذا العدد الترجمة العربية
للخطاب الذي ألقاه قداسة البابا على جمهور من الأطباء الطليان حول واجبات
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العصبة : مجلة أدب وفن تصدرها العصبة الأندلسية في سان ياولو (البرازيل)
السنة الثامنة ١٩٤٧ . مديرها ورئيس تحريرها : حبيب مسعود

followed Thorndike in insisting that the number of "factors" is almost infinite, thus abandoning any hope of a systematic or scientific solution. Prediction of behavior becomes a matter of trying out a few tasks which somehow seem related on a sample of your population and then hoping for a modest amount of prediction from the test situation to what again somehow seems likely to be a similar life situation. Sometimes it works. Many other psychologists manage to ignore (in their theory) the significance of differences between people and hence shrug off the problem. Most testers lightly assume that there is a "faculty" to explain their test results, though they never use the word in connection with their own work and will tell you that Faculty Psychology is dead.

Dead in its original form it may be. But the fact remains that we find system and regularity and dependability in the variations between people. To attribute these regularities to an indefinitely large number of "causes" is the counsel of despair. The effort to find a manageably small number of explanatory principles — call them factors, traits, faculties, characteristics or what you will — is one which must continue to challenge the scientific investigator.

say the American, or even of the basic pattern of personality of American college students, would be of enormous significance. The universal human pattern — well it would be nice to know that if there is one, but that can wait. Let us see if we can find the way people in large groups are “put together” and generalize to still larger groups when and if the facts warrant.

A similar pragmatic answer may be made to the related criticism which takes its stand on the unique *totality* of the individual. If it be true, as most of us concede, that the whole inter-penetrates and determines all the “members” of the whole, then there are no absolute “parts”, no *independent* units or factors. But there may be, there certainly are, “members” possessing such relative independence that they can be rightly treated *as if* independent for many scientific purposes. The problem is, as we have been insisting, to find what these relatively independent factors really are. That’s not easy.

The approach through factor analysis is promising but necessarily inconclusive. At bottom it is just what our discussion has implied, a vast and complicated geometrical metaphor. Mathematics may *suggest* what the facts of life are but for all its rigor cannot determine them. Moreover there are specific weaknesses in the quantitative basis for factor analysis. It rests on correlation indices and these are merely statements of *average* relationships. But the real basis is the living person, not an average. (This is one reason why the question of whether there is *one* basic human pattern or many is so indeterminate.) It is well, therefore, to keep in mind the warning given by Thurstone who has done more than anyone else to develop factor analysis : the results are merely suggestive, never conclusive. Mathematical analysis gives us hopeful hypotheses to try out on what is otherwise a chaotic welter of facts too complex to handle. But the hypotheses have to be tested on *individuals* and by essentially experimental procedures. Educability — or what is probably the same thing, behavior control — is the best test of a “real” factor. When under controlled conditions, one factor can be modified without affecting others, then the factor is a real functional unit. Such experimental tests of the “factors” has been little more than begun. The empirical test of hypothetical factors in vocational guidance, while not so rigorous, is also an experimental check. So far, the twelve “primaries” of intelligence seem to be working moderately well in differentiating vocational aptitudes.

Factor analysis, in summary, is an attempt to solve the problem posed by Faculty Psychology. Armchair analysis over a period of 150 years found the problem insoluble and psychology turned in another direction. When individual differences again came to the fore a few psychologists

If we reject this and hold that heredity plays a part in personality, it is still true that what we measure is a net product of both environment-experience and heredity. And since personal experience varies so tremendously, will not the basic floor-plan also differ? Is it after all so fantastic to hold that we are differently constructed? Perhaps there is no common floor-plan of personality to be discovered by factor analysis, or any other means.

One is reminded of the argument between Huck Finn and Jim as to why a Frenchman didn't talk like "us". Jim inquired why, since he was a man, he didn't talk like a man, but Huck pointed out that since he was a Frenchman, he talked like a Frenchman. Being humans, we ought all to have same basic human pattern of personality traits; but being persons who live individually different lives, perhaps also we acquire individually different personality patterns.

We ought not, it seems to me, exaggerate the uniqueness of human experience and the limitations thereby imposed on factor analysis. No doubt you *are* different from everyone else, have had experiences such as no one else has ever had from the beginning of time and are therefore actually differently constituted from all others — a little. But your likenesses are truly as many and as important as your differences. If we could find out that part of the floor-plan of personality which is marked out by those experiences we all have in common, it would be a great gain.

For in their total impact on the developing human being, the common, the virtually universal, elements of experience far out number in weight those which are unique. Doubtless the personality pattern of the Japanese differs from the Americans not merely quantitatively, but to some extent qualitatively. But even though "East is East, and West is West", there is a tremendous fund of like experiences and the twain *can* meet on common ground. A greater poet than Kipling has put in Shylocks' mouth the case for the common or shared pattern of personality development: "I am a Jew. Hath not a Jew eyes? Hath not a Jew hands, organs, dimensions, senses, affections, passions? Is he not fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same winter and summer as a Christian is? If you prick us, do we not bleed? If you tickle us, do we not laugh? If you poison us, do we not die?" Probably there are more experiences creating personality which are common to the most primitive savage and to the most cultured American, or European, than there are experiences which are different.

A description of the basic floor-plan just of personality of one culture,

A more radical question emerges at this point. Granted that there are "structures" in the person, do we have the same structures in all men? What we are suggesting is that human beings may be put together according to radically different "floor-plans". If we define a kitchen as a room set aside for cooking, a dining room as one set aside for eating, a parlor as one set aside for social intercourse, then one house may have a parlor but neither a kitchen nor a dining room but only a combination kitchen-diner, while another house might have a kitchen but neither distinct parlor nor dining room, but only a combination dining-living room. Yet in both houses, the functions of cooking, eating, and social intercourse might proceed. *And from the analysis of the three functions it might be difficult or impossible to make out what the respective floor-plans are.*

Let's take a simplified example. Suppose we seek to determine the "strength" of the skeletons of a number of animal species, and we aren't allowed to dissect them. We might in that case try to measure the "rigidity" of the living animal as an index of skeletal strength. But such analysis would certainly fail us if some of the species were insects which gain their rigidity not from a skeleton but from their hard outside shell. It wouldn't even work for a turtle (which has a true skeleton, but also a shell) and it wouldn't work for a man in armor or for a cataleptic. (In this comparison, being rigid is the analog of the measurable behavior — like driving a car or speaking French — and the skeleton is the analog of the alleged basic factor.) In other words, factor analysis in such a case would not get at the basic structure. It works only when there are "structures" common to the whole group.

The analogy of anatomical organs, however, suggests a line of thinking more favorable to factor analysis. Whatever may be the difficulty in determining what they are, all humans have the same anatomical organs with exceptions unimportant for this discussion. Now the psychological "factors" we are seeking are in some fashion to be thought of as the "organs of personality". Is it not reasonable to expect that we should all have the same ones, though in differing strength?

Putting it so raises another very important theoretical point. Our anatomical organs are determined by heredity — that is certainly a major reason why we all have the same ones. Experience determines only the strength and use of these organs. But personality as we find it and as we measure it, is certainly through and through subject to determination by environment and experience. Of most personality traits it *seems* as if experience largely determines not merely how strong they will be but whether we shall have them at all.

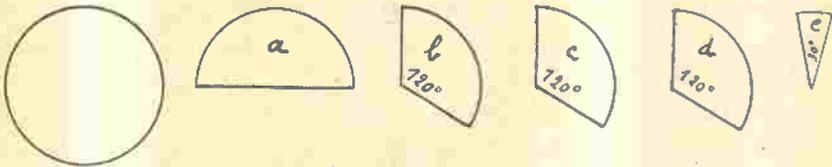
Thurstone has presented evidence that nearly all the important differences in *ability* between persons can be accounted for in terms of twelve so-called primary factors. Let us avoid naming them just yet and simply designate them by capital letters. Thurstone's view is that the basic differences in all the kinds of ability found in paper-and-pencil tests between John Doe and Richard Roe are due to the differing amounts they possess of factors A-B-C-D, etc. And Thurstone holds, on the basis of considerable evidence, that in fact the 57 tests he used in this investigation cover alarge and much the most important part of all intellectual activity. Thus even so apparently manual an ability as that of shooting a gun might be most accounted for by factors D and F with only minor contributions from factors symbolized by the rest of the alphabet; whereas ability to analyze the meaning of figures would depend most on factors A, F, and G. If Doe is strong in D and F and not too bad in the rest he becomes a marksman whereas Roe who is strong in A, F, and G becomes an accountant or an actuary. If Roe is strong in A and F but not in G, he would make a better insurance salesman than an actuary. (Provided, however that he is strong enough in certain social traits, x, y, and z, not included in Thurstone's list of intellectual factors.)

There are mathematical limitations to Thurstone's method of finding the factors and a number of other statisticians have suggested alternative methods. The results, so far, seem much the same. There is, however, a very fundamental question: have we a right to suppose that different personalities break up in the same ways? To revert to the example of the circle of Figure I, may not Antonio's personality actually divide as symbolized by the pieces a, g, h, i, j, k, l, whereas Populoff's personality divides along the lines b, c, d.

This would mean that Populoff would have no factors a, g, or h at all, Antonio no factors b or c or d — not merely that these traits are of low strength but that they do not exist in the respective men. Yet they might be able to do a number of the same things at the same level of ability. For many kinds of behavior reflective common sense leads to just such a conclusion. No refined statistics is needed to show that Antonio's "honesty" may be utterly different from Populoff's yet may lead to identical behaviors. As we have been insisting all along, you can't begin just anywhere with an hypothetical trait, and try to break it down. A pie can be cut in an indefinite number of ways but an animal organism (even a roasted fowl) has a pre-existing structure which resists being subdivided in "unnatural" ways. We have to find the joints or carve against the grain of the meat. To depart from metaphor, the true functioning units must be discovered — not just made or inferred from mere words.

Let us now restate the problem. We want to find the smallest number of factors which will account for all the differences in the regular and dependable behavior of a group of persons. If one big factor accounts for most of the variation perhaps it is reasonable to think we should begin with that. Spearman thought that the common element in intelligence which he called 'g', runs like a silver thread through all abilities and should be taken as our first and most important unit. However, if we begin with this big 'g' factor, can we account for all the rest of the variation between people in terms of a reasonably small number of other factors ?

A diagram will help to make the problem clear. Suppose we are required to fill the circle with the smallest number of the component blocks pictured. (All the blocks are true sectors of the circle.)



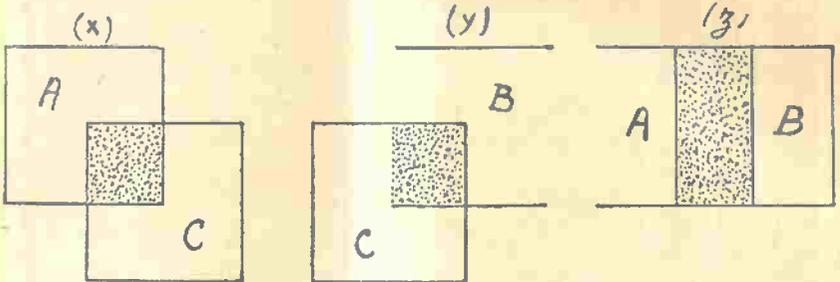
(f, g, h, i, j, are all like e.)

(Fig. 3)

If we begin with a, we can finish the circle by filling in with the six smaller blocks e, f, g, h, i, j, making a total of seven, or by filling in with one of the middle-sized blocks and two of the small ones for a total of 4. If, however, we begin with b, we can finish the circle out with c and d for a total of three. Obviously this is the more economical solution. Now, of course, this is only an analogy but it does help to state the problem. In similar fashion it seems from present evidence that we can account for a man's ability better — i.e. in fewer factors all told — if we do not make our first "cut" so all-inclusive as a hypothetical "general intelligence". If we begin with general intelligence, which is a big cut like block a, we have to add to general intelligence a whole multitude of small factors (analogous to block e) in order to account for all the varieties of ability like typing, algebra, logic, foreign languages, mechanics, etc. But if we begin with certain smaller blocks like b and c maybe we can account for *all* abilities with fewer factors.

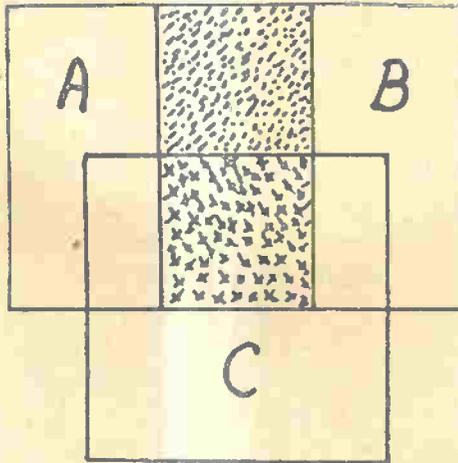
At any rate, we may now state what factor analysis is : It is a method for discovering the smallest number of factors which will account for all the correlations in a table of inter-correlations (i.e. where each test is correlated with every other).

But if we put all three squares together, we see that there is a considerable area in which A and B and C all overlap. (The cross-hatched shading of Fig. 2)



(Fig. 1)

Now if you measured the relation between A and B, the correlation index would be too high for it would take in the cross-hatched area, an area that depends on C as well as A and B. That is, there is something in this area common to social, mechanical and abstract ability, all three. Partial correlation enables us to compute how large this area common to all three factors is.



(Fig. 2)

A number of statisticians, finally, have found ways to extend this technique and thus to determine what are the common factors found in *all* the intercorrelations — that is, in the correlations of each test with every other test in the pool.

fication and of education and training — that is of the things people can do or can learn to do, and of their differences in this respect. As we all recognize — all too well if we are professionally engaged in the field — treating individuals in terms of degrees of their “intelligence” may work, may be useful, but only up to a point. It does not clearly enough tell just what kinds of things they can do or learn to do. It is, therefore, a thoroughly practical-minded goal to see whether we cannot find the units or components of intelligence. Just as chemistry has gained immeasurably in control of the material world by discovering that all objects can be accounted for by less than a hundred units or elements, so would psychology gain in control of human behavior if we could find a comparable set of elementary units.

The general problem thus is, “What is the smallest number of components or factors which will account for the regular or persistent differences in the actions of different persons?” Thurstone restates the problem in the special form, “What is the least number of independent factors which will explain the correlations between different tests?”

Statisticians are usually careful to point out that a mathematical index of correlation is not by itself a proof of causal relation. Practically, however, if *on other grounds*, two tests are believed to be somehow causally related, we may take the correlation coefficient as a measure of the extent to which the two tests rest on a common factor or group of factors.

Furthermore, we are able (by the technique known as partial correlation) to estimate how much of the common basis for the correlation between two variables is due to a factor found in a third. For example we can determine how much of the correlation between “social intelligence” scores and mechanical intelligence scores is due to a factor found also in “abstract intelligence”. Or, put in another way, we can state how large would be the correlation between “social” and “mechanical” intelligence if the influence of “abstract” intelligence were eliminated.

Relations of this sort are often visualized in terms of overlapping figures. Thus let us represent whatever it is that makes us “socially intelligent” by square A, “mechanically intelligent” by square B, “abstractly intelligent” by square C. The extent to which abstract intelligence enters into social intelligence is indicated by the shaded or overlapping portion, of Fig. 1. (x). (i. e., as we have noted earlier, ability to deal with abstract ideas is helpful or even necessary to effective dealing with people). And so with (y) and (z). The shaded portion therefore represents the index of correlation; or put in other terms we may say that problems falling within the shaded area can be intelligently met only to the extent that both factors are operating.

Instead of the number of names depending on the number of actual human traits, we should be in the position of having the number of traits depend upon how many names we could dream up.

The effort to cut down the list by a merely logical analysis, however, runs into difficulties. It is easy to cut down on obvious synonyms like brave and courageous, or polite and courteous. And it is not hard to see that some of the terms are merely class names, not names of any concrete trait. Thus "virtuous" does not imply that a person has the trait of "virtue"; rather it implies that one is high in many or all of a number of concrete qualities such as kindness, honesty, chastity, responsibility.

But eliminating these still leaves us with perplexing problems. To be truthful depends (at times, at least) upon being brave; to be honest is obviously partly the same thing (but not quite) as being truthful. And on the other hand, it is very doubtful that the very same qualities are involved in being brave under all different circumstances.

Thus we may question that the same qualities are needed to be brave when a thug threatens one's sweetheart and when one is threatened with ostracism if one does not abandon a principle. To complicate the picture, some of the qualities which help one to be brave may also help one to be intelligent, extraverted, adventurous, or romantic. Bravery, we see, is, on the one hand, made up of many qualities or traits, and those qualities, on the other hand, also contribute to other traits beside bravery. This is the position to which the Faculty Psychology found itself reduced.

Those traits called abilities are in no different case. From the beginning it has been doubted that intelligence is a unit-trait, but the efforts to analyze it from an armchair have not been very successful. Thus it has been suggested that there are four kinds of intelligence: concrete or practical (able to deal with things), social (able to deal with people), abstract (able to deal with ideas), and esthetic (able to deal with beauty). Now there is no question that there are tasks or problems in these four areas and that some people excel in one more than in the other.

But are the tasks really distinct? Does not, for example, the ability to deal with ideas enter into dealings with people — enter in not as an extra factor but as a necessary part of social intelligence? Or again, can we separate ability to deal with things from abstract intelligence? None of the four proposed kinds of intelligence, in short, turns out to be quite independent of the other three — strength in one contributes strength to the others and vice versa.

Well, what of it? Is not the whole discussion pretty theoretical and academic? It will not seem so if we think about the problems of classi-

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FACTOR ANALYSIS EXPLAINED

(Without Mathematics !)

Horace B. English

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The basic fact with which we deal in modern psychology is a person or other animal acting in such a way as to produce some sort of recognizable effect or change in the external world. Mankind has developed an enormous vocabulary — mostly untechnical — for naming these effects. And an equally large vocabulary has grown up to describe the traits or qualities of a person who performs the acts or produces the changes. Thus a person who produces certain effects on machinery is called mechanically-minded; one who produces pictures is called artistic and so on. Some of the changes produced are in the social sphere and so we call persons courteous, shy or brusque. A few years ago Odbert and Allport found that there were 17000 terms in the English dictionary to describe personal qualities — with new ones being added daily, even before the War added so greatly to our name-calling vocabulary. Other languages, moreover, have many terms not represented by a synonym in English.

No one who examines the list is likely to suppose, however, that there are as many separate and distinct qualities, or traits, of a person as there are terms. Yet in our unguarded moments we are likely to make an assumption which implies just that, or something even more incredible. If a man performs a brave act, we say he has the trait or quality of bravery; if he performs a generous act, we say it was his generosity which made him act so. We assume, that is, that there is some peculiar quality of the *person* more or less exactly corresponding to the quality of the *act* he performs. And since there is literally no limit to the number of qualities of men's acts which can be described or named, we should be forced — by this reasoning — to postulate an indefinitely large number of qualities in a person.

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