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The Psychology of Rumour.

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The subject of "rumour," though at all times a fascinating field for the psychologist, possesses to-day an exceptional importance and interest. Recent history has furnished an overwhelming demonstration of the fallibility of human evidence, and has provided a mass of material which should yield a rich harvest to the scientific investigator. The aim of the present paper is to indicate the results which in the past psychology has already achieved in this field, and the bearing of those results upon the problems of the present day.

Rumour is a complex phenomenon consisting essentially in the transmission of a report through a succession of individuals. It may be provisionally regarded as the product of a series of witnesses, each of whom bears testimony to a statement imparted to him by his predecessor in the series.[1] The reliability of a rumour depends, therefore, upon the accuracy with which each such statement is transmitted, and ultimately upon the accuracy of the report furnished by the first member of the series, who is assumed actually to have seen or heard the event in question. This latter factor, the testimony of the actual witness of an event, is what the law terms "evidence," and it is clear that an examination of its psychology must precede any attempt to attack the more complicated problem of rumour.

[1] It is necessary to emphasize the provisional character of this definition. We shall subsequently find that it is incomplete, and that it requires considerable modification (*vide* p. 13).

The first scientific investigation of evidence seems to have been carried out, not by psychologists nor by jurists, but by historians. The methods of historians in estimating the value of evidence have undergone a considerable change in modern times. Formerly they accepted the moral character of a writer as the test of his reliability; if his character was known to be good then the statements which he made were held to be accurate. They debated whether their witness was honest or dishonest, whether he spoke truth or was deliberately trying to mislead for certain definite conscious ends. If this question was decided in the witness's favour then all his evidence was accepted. Now, however, the reliability of each individual statement is separately estimated. The moral character of the witness remains, of course, an important factor, but the historians also take into account every possible condition which may have exerted an influence upon the particular statement under examination: the source of the witness's knowledge, the time-interval separating him from the events in question, his views and prejudices, his profession, religion, and political party. They consider, moreover, not only whether the witness is deliberately lying, but whether and how far he is unconsciously perverting the truth owing to the action of the factors just mentioned. In recent years attempts have been made to codify the rules to be observed by historians in the estimation of evidence, and a considerable literature on this subject now exists, amongst which may be particularly mentioned the works of Ernst Bernheim [2].

Among professional psychologists the first definite step in the direction of investigating the psychology of evidence seems to have been taken by Binet [3], who in "La Suggestibilité" (1900) called attention to "the advantage that would accrue from the creation of a practical science of testimony." The suggestion was taken up enthusiastically by Stern, of Breslau. Stern [15] founded a school of experimental psychology whose energies were almost entirely devoted to the psychology of evidence. Their work was in the main experimental, and they carried out a prodigious amount of painstaking research. One can make no attempt to give any adequate account of this work here, but it will be of interest to describe the general methods employed, and to give a short résumé of the principal conclusions reached.

The methods adopted all consist essentially in submitting a predetermined experience to a number of subjects, subsequently obtaining from the latter a report of what they have experienced, comparing the reports with the original experience, and finally collating and evaluating

the results thereby achieved. For example, a picture shown is for a defined period of time, and after a fixed interval each observer is required to give evidence as to the nature and details of the picture he has seen. The time-interval between observation and report may be varied from nothing to several weeks. The report is obtained by two different methods—narrative and interrogatory. In the former the subject is asked to write out as fully as possible all he has seen. In the interrogatory method a number of questions are asked by the experimenter, designed to cover in their entirety all the details of the original experience. The subject is asked, for example, "Were there any animals in the picture?" "What colour were they?" The questions are carefully constructed and classified into simple inquiries devoid of any suggestive implication—e.g., "What is the size of the picture?"—and "leading questions" containing suggestive implications of various degrees—e.g., "Has the man a brown coat?" The interrogatory method corresponds essentially with the "cross-examination" of our law courts. Each detail of a report obtained by these methods is graded according to the subject's assurance of its reliability. The degrees of assurance generally distinguished are "complete uncertainty," "hesitancy," "certainty," and "attestation." "Attestation" means that the subject is prepared to swear to the truth of the evidence in question.

The most important general result of the experimental investigations conducted along these lines is that they upset in the most definite and complete manner two naïve views widely held by the laity: (1) that evidence given with the best knowledge and honesty is a correct reproduction of actuality; (2) that evidence which is shown to be false must be due to deliberate lying, or at least to culpable carelessness.

Experiment shows us that completely correct reports are not the rule but the exception, even when the report is made by a competent observer under favourable conditions. It must be clearly understood, moreover, that this statement remains true if only those details are taken into consideration of whose accuracy the reporter is certain. Borst [5] found in 240 reports only 2 per cent. of errorless narratives and 0·5 per cent. of errorless depositions—i.e., reports obtained by the interrogatory method. The average reporter, when no suggestive questions are employed, exhibits a coefficient of accuracy of roughly 75 per cent. In other words, only 75 per cent. of the items of which the reporter is *certain* are in fact accurate. Moreover, attestation does

not guarantee accuracy. Although the number of errors in sworn testimony is considerably less than that in unsworn testimony, they may nevertheless amount in the former to as much as 10 per cent.

A detailed examination of the results obtained by these investigations yields a large number of interesting facts, of which the following may be selected for special mention: The effect of increasing the time-interval between the observation and the moment when the witness is called upon to give evidence regarding it is that, though range and accuracy are both diminished, assurance is not equally affected, but shows a surprising constancy. This statement, rendered in non-technical language, means that, though the number of details remembered and their accuracy are both diminished by lapse of time, the witness's belief in the truth of his evidence is but little affected. From this it may be concluded that assurance and readiness to swear to the truth of the evidence given depend upon the " personal equation " of the witness rather than upon freshness of memory. A second interesting fact established by the experiments is that, if the interrogating method is employed instead of the narrative method, the range is increased but the accuracy is greatly diminished, that is to say, more details are remembered but fewer are truthfully reported. This is, of course, due to the suggestive influence exercised by the questions asked. The diminution of accuracy when definitely suggestive or leading questions are used is evident enough in adults, but in children this effect is very marked indeed. For this reason evidence given by children should only be accepted with the greatest caution; their range is small, their accuracy smaller still, while their assurance is relatively very high.

It will be seen at once that these experimental results are of very great practical value, and that they establish conclusively certain basic facts which are of fundamental importance to the psychology of evidence. Stern and his school, however, do not get much beyond this. Their work, except here and there, presents us with no dynamic view of the forces responsible for the facts they describe, no conceptions which enable us to understand *why* these things do and *must* take place.

We get some illumination in these respects, however, from a third group of investigators, who approach the subject from a different point of view and with a very practical aim—the jurists. The lawyer must obviously have a considerable interest in the psychology of evidence, and legal authorities have from time to time during the past two centuries shown that they possessed at any rate some inkling of the

principles ultimately laid down by Stern and the Breslau school. Jeremy Bentham concerned himself with the subject in considerable detail, and later legal writers have dealt with supposed perjuries and the danger of suggestive questions. The first comprehensive and detailed work from the legal side on the psychology of evidence, however, would seem to be that of Hans Gross, the well-known criminologist.

Gross [9] points out that the psychology of evidence involves not only a memory-process and the question of the fidelity of that process, but also the processes of perception and registration which take place at the moment of the occurrence reported upon, and he holds that even more weight is to be ascribed to these latter processes than to the former. He lays stress on the personal equation of the observer, and shows that the same objective event may be very differently perceived by different observers.[1] What a man sees depends not only on what is actually presented to him at the moment, but on perceptual additions due to prior knowledge and interests. He tends to group an event egocentrically, to overweight the factors which arouse his interest and to neglect others. This explains the paradox that an observer who knows nothing whatever of a subject may be a better witness in a matter connected with that subject than one who is an expert therein.

Another legal authority, Heilberg [10], brings forward some further considerations of great value. He points out the important influence exerted by events intervening between the observation and the report, and shows how the accuracy of a memory picture which is constantly brought up and discussed may be perverted, owing to the action of auto-suggestion, external suggestion, and other factors, at least as much as a picture left in pure passivity. He explains by this principle the epidemic of false witnesses which so often occurs in the later stages of sensational trials. Heilberg, moreover, illuminates the path along which we must tread in our search for the psychological laws responsible for the perversion of evidence, in that he calls our attention to the influence exerted upon the witness by the solemnity of the court, the feeling that he occupies the centre of the stage and that his words are big with fate, and the consequent appeal to his vanity.

[1] Gross points out that we do not actually see what happens in a moment of time, but a combination picture, grouped from successive moments, and the mode of grouping may be different in different observers. Thus, if an event objectively consists of *a*, *b*, *c*, . . ., then one observer may perceive *abc*, *def*, *ghi*, another *bcd*, *efg*, *hij*, while a third may miss points and perceive *qcd*, *fhi*, *kmo*. This conception seems to correspond with the "noetic form" of modern psychologists.

Some extremely interesting and stimulating observations are to be found in an article written by Stern in collaboration with his wife, entitled "Memory and Testimony in Early Childhood" [15], and consisting essentially of a study of the gradually developing mind of their own child. The points which we desire specially to mention are contained in a chapter on "False Witness in Children." Here the authors develop the important proposition that between lies and genuine perversions of memory there exists an intermediate group of phenomena to which they give the name of "pseudo-lies." The commonest variety of these pseudo-lies is the relation of some fiction which the child represents as an event which actually occurred. On one occasion, for example, a child informed her parents, after a visit to the Zoo, that she had stroked the bears, and became tearfully and stormily insistent when the veracity of her account was called into question. This, of course, is the phenomenon which we term "phantasy," and which is familiar to us in the day-dreaming of the adolescent. In the child, however, phantasy is not sharply distinguished from reality, and it tends to play with fictitious accounts of past events just as it plays with fictitious representations of the present. "While reality and make-believe in the life of the child are not yet distinct from one another, so also are truth and falsehood not yet distinct." A similar inability to distinguish truth from phantasy has been noted by Cramer [7] in the case of imbeciles.

So far as I have been able to discover, Stern does not seem to have applied these valuable observations upon the forces at work in the child to the problem of the psychology of testimony in the adult, nor to have realized that the adult is moved by precisely the same forces as the child, though of course less blatantly, and with their action modified by other factors.

The part played by phantasy in the psychology of testimony has also been dealt with by the historian, Ernst Bernheim [2]. This author has seen, moreover, the close relationship between the mechanism at work here and that underlying the evolution of myths and sagas, a problem to which we shall subsequently return. Bernheim also remarks on the influence exerted on the witness by the impulse to assign satisfying motives and to round off the story. When we pass from the question of testimony to that of the transmission of a report through a number of witnesses—i.e., from the question of evidence to that of rumour—the recognition of this factor becomes of essential importance.

Now if we review the various facts elucidated by the investigators we have so far considered, and endeavour to group them into a coherent

whole, we shall find that our task will be greatly facilitated by applying to those facts certain conceptions employed in modern psychology, in particular the conception of the "complex." We shall thereby be enabled, moreover, to obtain a considerable insight into the mechanisms responsible for the phenomena whose existence has been demonstrated.

A "complex" may be defined as a system of related ideas possessing a certain affective load which tends to produce in consciousness trains of thought leading in a definite direction. Thus we explain the circumstance that two politicians will arrive at diametrically opposite conclusions when presented with the same body of facts by saying that the train of thought is directed in the one case by a Conservative complex, in the other by a Liberal complex. It is held, moreover, that a complex may exert its action without the individual himself being in the least aware that his thinking is so directed. The individual may, indeed, believe the causes responsible for the conclusion he has reached to be quite other than they actually are. For example, each of the two politicians may honestly believe that his opinion is the purely logical result of a dispassionate consideration of the facts presented to him. The process of self-deception by which this erroneous belief is given a superficial plausibility is termed "rationalization."

This conception has proved extremely fruitful in both normal and abnormal psychology, and we can derive considerable aid from it in our investigation of the mental processes involved in testimony. It will be convenient to divide these processes into three stages—perception, conservation, and reproduction—and to examine in each stage the effects that may be produced by the action of complexes.

Firstly with regard to *perception*. It is an elementary commonplace of psychology that in every perception an endogenous factor is involved. When we perceive an orange, our percept consists, not only of the extensive yellow sensation which is all that is actually presented to us, but of an indefinite number of other factors, traces of former muscular and tactual sensations for example, which are added thereto from the store of our past experience. An endogenous factor of another kind is also present, however, whose activity accounts for the fact that perception is a selective process, and not a merely passive submission to sensations. We tend to pick out from the material presented by our senses the elements which are for some reason interesting to us, and to perceive only that in which we are interested. We may express this process by saying that our complexes exercise a selective action upon

our perceptions. Complexes may exert, moreover, an action which is not only selective but perversive, and our perceptions may not correspond with the objects actually presented to us. Thus we tend to perceive what we expect to perceive, to mistake the stranger entering our gate for the friend whose arrival we are awaiting, to hear the motor-car for which we are anxiously listening. We can explain in this way some of the evidence which was showered upon us at the time of the Russian rumour. I conversed personally with a soldier who assured me that he had himself seen trains filled with Russian troops passing along the line where he was on guard, and he described to me the tall bearded men and the unusual uniforms. The effects of complexes are proportional to their emotional strength. Hence there is a very grave danger of perverted perceptions in times of great emotional stress, a danger which must be carefully taken into account if, for example, we are called upon to weigh the evidence of even eye-witnesses of scenes occurring during the storm of battle or invasion.

Passing on now to the second process involved in evidence, *conservation*, we find further mechanisms by which perversion may be produced. Our memory-traces of events we have witnessed are subject to simple forgetting, whereby elements may be lost whose omission materially alters the picture, and to active forgetting, the process termed repression, whereby elements may be dislocated from their normal position or essentially altered in their character. The manner in which the unhappy experiences drop out of our memories of former holidays, and the illusory rosy light which so often shines upon the past, may be cited as examples of this latter mechanism. In it, of course, complexes play an important part.

In the third and final process, that of *reproduction*, there are yet other mechanisms tending to the perversion of evidence. Some are due to the suggestive power exerted by the personality of the examining counsel, and the form in which he casts his questions. Here belong, also, those effects produced on a witness by the particular circumstances attending the giving of his evidence, which have been insisted upon by legal investigators. Among such circumstances may be mentioned, for example, the solemnity of the trial with its paraphernalia, and the "centre-of-stage" feeling of the witness. The most prominent complexes here in action are the grandiose or "self-assertion" group. Hence arises an impulse which drives the witness to say something effective, to round off the story, and to fill in gaps—in fact, an impulse to stage his evidence so as to satisfy the canons of dramatic art.

Closely associated with these latter factors is phantasy, which may be regarded as affecting both conservation and reproduction. Phantasy is produced when complexes, instead of trying to achieve their ends by influencing the world of reality, obtain a partial satisfaction by the construction in the mind of trains of imagery, in which the ends of the complexes are, in imagination, abundantly realized. A simple example is the well-known day-dreaming of adolescents. Stern, in the paper on the child to which we have already referred, fully recognizes the important part played by phantasy in the perverted testimony given by children, but there is, of course, no doubt that this factor is fundamentally important in the adult also, although its action is not so obvious and unrestrained as in the child. Ogden [12] has pointed out that the essential difference between phantasy and memory does not appear to lie in any definite peculiarity of content, for intrinsically they are not clearly distinguishable, but that it is largely the problem before us with its directive tendencies upon which the practical distinction rests. Hence it is easy to understand that complexes, which occupy so important a position amongst the directive forces of the mind, may introduce phantastic elements into a memory-content without the interpolation being detected by the individual himself. As examples of the effect of phantasy upon evidence taken from the sphere of law may be mentioned false confessions and the often-noted appearance of false witnesses in the later stages of sensational trials. In everyday life examples are easy to find. Our alleged memories of the events of early childhood are often destitute of any but the smallest foundation in fact, and that lack of veracity in the recital of past exploits, in which a possibly undeserved pre-eminence has been attributed to the fisherman, is by no means to be regarded entirely as the result of deliberate lying.

Our understanding of the part played by complexes in the perversion of testimony will be deepened if we take into consideration the facts provided by pathology. We should expect to find here, of course, perversions which are more obvious and accentuated. This very accentuation, however, will enable us to grasp their essential character, and thereby to appreciate the presence, though in a far slighter degree, of precisely the same mechanisms in the normal.

For this purpose it will be convenient again to divide the psychological processes involved in evidence into the three stages of perception, conservation, and reproduction, and to examine the pathological variations occurring in each.

The pathological perversions of perception include hallucinations, illusions, and certain delusions of reference. All these are now generally regarded as being due to the distortion of perception by an endogenous factor, and this endogenous factor can be traced, in some instances at least, to the action of complexes, whereby ideas dissociated for some reason from the main stream of consciousness are, as it were, projected outwards.

It is a little difficult to distinguish sharply between the pathological variations of conservation and reproduction, and they may therefore be considered together. Here belongs the well-known phenomenon of paramnesia, of which examples frequently occur in many varieties of mental disease. Such, for instance, are the alterations in the memories of the past produced by a system of delusions, and the confabulations of the alcoholic or general paralytic. Most interesting for our present purpose is, however, the condition known as pseudologia phantastica, characterized by the relation of fictitious reminiscences. The patient, with an air of entire verisimilitude, will give a detailed and often elaborate history of his past life and experiences, which investigation shows to be wholly imaginary. Dr. Stoddart, in a paper devoted to the description of an extremely interesting case of this disorder, ascribes the symptoms to the presence of a morbid instinct for lying. I must confess that I do not find this theory very satisfactory. Such an instinct would presumably affect all the patient's statements, whereas in fact only certain statements are perverted, and the perversion is always in a definite direction. Dr. Stoddart's patient, for example, whom I subsequently saw at Long Grove, did not lie as to whether she had had beef or mutton for dinner, but only in the construction of a fictitious past which presented her as a distinguished, influential, and exceptionally interesting person. In this case the confabulations were evidently elaborate phantasies, whose creation we must ascribe to the activity of grandiose complexes, and it seems probable that a similar mechanism always underlies the manifestations of the disorder. Such a conception, moreover, enables us at once to understand the obviously close similarity existing between pseudologia and the ordinary day-dreaming of adolescents. This latter analogy has been noted by Risch [14] in the course of a very valuable paper wherein five cases of pseudologia phantastica are described. He finds in all cases certain common factors, among which may be specially mentioned an irresistible impulse to confabulate, with the consequent production of a peculiar feeling of pleasure, and a characteristic egocentric orientation of the

patient's trains of thought, so that the patient is himself always the hero of his confabulations.[1] The patients, in their pseudo-reminiscences, keep fairly well within the possible, and only the total bears the stamp of fabrication. Unlike the ordinary liar, they are untroubled by exposure, and merely stimulated thereby to further confabulations, or to some often ludicrously inadequate evasion. One patient, for example, when his story of exciting adventures in the company of a Russian count was demonstrated to be entirely fictitious, merely remarked, "But I have nevertheless often met Russians." So far as I can make out, Risch seems to think that the patient has a genuine belief in his own fabrications, although he endeavours to distinguish the condition sharply from dementia paranoides. It is, however, very questionable whether such a belief really exists. The reaction of the patient, if exposed, is quite different to that accompanying the demonstration of falsity of a delusion; the fabrication *can* be exposed, the delusion cannot. It would seem that in the pseudologia patient the condition, as regards degree of belief, is a half-way stage between the entire absence of belief found in the case of ordinary day-dreaming, and the full and absolute belief accompanying delusions. This half-way stage is difficult to define, but it is probably closely similar to the pseudo-lying observed in children, which Stern has so admirably described in the paper we have already mentioned.

Nearly allied to the phenomena of pseudologia phantastica are the well-known phantasies of hysterics. An hysterical patient under my care at University College Hospital presented a member of the staff with some obviously freshly cut chrysanthemums which, she said, had been sent to her by a relation in California. When doubt was cast upon her story, she endeavoured to substantiate it by the production of a forged letter purporting to come from the relation in question, in which reference was made to his gift. As a further example of hysterical phantasy may be mentioned the well-known false accusations of rape. The complexes underlying these cases are, of course, obvious.

The importance of the facts of pathology in considering the question

[1] Risch points out that these fabrications are related not only to the phantasies of the day-dreamer, but also to the trains of imagery which occur in the novelist and poet. He considers, however, that the patient plays the rôle of actor as well as that of author, whereas the novelist and poet play only the latter. This is, I think, a misapprehension of the psychology of the novelist, who, in many cases at least, obviously lives in the characters which he creates. As an interesting instance we may mention Mr. Arnold Bennett's "Clayhanger" and "Hilda Lessways," two novels in which the same scenes are described, in the first from the standpoint of the hero, in the second from the standpoint of the heroine.

of the psychology of evidence is clearly very great, for they serve to show to what an extent it is possible for testimony to be perverted by phantasy. At the present time numerous examples of these more extreme perversions are occurring, and are playing their part in the propagation of rumours. We may cite the case of the Scotch nurse, which attained considerable newspaper notoriety in the early days of the War. A young girl produced letters purporting to come from a hospital in France, describing the death of her sister after fiendish atrocities had been perpetrated upon her. The story was made public and aroused widespread indignation and sympathy, promptly cut short, however, by the alleged victim herself, who announced that she was alive and well, and had never left the confines of Yorkshire. Investigation showed that the girl had written the letters to herself, and that they were obviously the productions of hysterical phantasy.

It must be remembered, however, that these pathological cases are only extreme instances of the activity of a psychological process which belongs to the fundamental structure of the human mind, that the steps from the pathological to the everyday are easily graded, and that the phantasy which is responsible for the bizarre phenomena we have latterly been considering is made of the same essential stuff as the normal phantasies of the child and the quasi-normal phantasies of the day-dreamer. Hence it is easy to understand that this process in its minor grades may play a part in the perversion of evidence given by average men, and that it constitutes a factor which must always be carefully estimated when that evidence has to be weighed. Recent history has shown, indeed, that such perversions of evidence in normal men may, under suitable conditions, attain a growth hardly less luxuriant and phantastic than that we have described in cases which are definitely pathological. Except for recent history, we should, I venture to think, have unhesitatingly said that in normal people perversions could not occur to such an extent, and we should have drawn the line between normal and pathological far more definitely than experience has shown to be actually allowable.

So far we have dealt only with the question of testimony, that is to say, the report given by a witness on some event which he has himself seen or heard, or which he has himself experienced, and with the perversions to which his evidence is liable. Before passing on to the larger and more complicated, but closely allied, problem of rumour, we may pause for a moment and summarize the position we have been able to reach.

We have found, by the test of experiment, that a witness's report of his experience, even when given with the utmost honesty and conscientiousness, is rarely a completely correct reproduction of actuality, and that a proportion of the details, including even those of whose truth the witness is absolutely certain, are erroneous. We have seen that these perversions are dependent upon forces of whose action the individual himself is mainly or entirely unconscious, and that amongst those forces a prominent part is played by complexes. It has been indicated, moreover, that the perversions of evidence which occur in the sphere of pathology are due to precisely the same mechanisms, and the study of the gross and obvious effects produced in these latter cases has helped us to appreciate and understand the more restrained effects which are met with in the normal. Conscious perversion of evidence, or deliberate lying, has not been considered, although, in any complete work on the subject, a chapter on this and its psychology ought undoubtedly to be included.

Earlier in the paper we have provisionally defined rumour as the transmission of a report through a succession of witnesses, each of whom bears testimony to a statement imparted to him by his predecessor in the series. Now if this definition were sound and sufficient our task would be practically over. It would only remain to point out that at each stage of the series the testimony given would be liable to perversion in the manner we have described, and that the measure of the final perversion would be the sum of the perversions occurring at all the stages. There can be no doubt, however, that such a view would be narrow and inaccurate, and that it would fail to take into account many facts of the utmost possible importance. It is a commonplace of knowledge that a series is something more than, and different from, the mere sum of its factors. The circumstance that we are dealing with a multitude of persons, that rumour is a social and not an individual phenomenon, in itself introduces entirely new elements, and these elements must be examined and appraised. Moreover, there are other facts not in accord with our provisional definition. A rumour does not always arise as the result of a succession of reports proceeding from a single centre of origin, but sometimes appears to show a kind of spontaneous evolution, growing simultaneously from many distinct centres. Such a phenomenon suggests an origin other than a mere succession of witnesses, and reminds us of the development of myths and sagas, wherein legends almost identical in their content are evolved in widely separated nations and countries. Here again are new factors requiring investigation and analysis.

Hence, although the transmission of a report from witness to witness is an integral part of rumour, it is not the whole thereof. It is for this reason that most of the experimental work on rumour hitherto attempted has failed to produce much illumination. The experiments have been limited to the serial transmission of reports, and naturally no new facts have emerged other than those already ascertained in the investigations on evidence. Rumour is, indeed, so complex a process that experimentation is difficult to devise, and we are compelled to fall back upon the experiments provided by Nature. Fortunately she has not been niggardly during the past twenty months.

We have said that rumour is a social phenomenon, that it is something which occurs in communities, and has particular properties owing to that very fact. It is therefore necessary to take into account certain psychological principles relating to the behaviour of communities, and especially of that particular kind of community which we call a "crowd."

The psychology of the crowd has aroused much attention during recent years, and several authors have dealt with it at some length. The pioneer and the best known of these is Le Bon [4], and the last is Sir Martin Conway [6], whose "The Crowd in Peace and War" was published at the end of last year.

Le Bon pointed out that a crowd behaves differently from an individual, and he ascribed to the former an entirely distinct type of thought. His views may be shortly summarized as follows: Whoever the individuals forming a crowd may be, the fact that they have become a crowd puts them in possession of a kind of collective mind, which makes them feel, think, and act in a manner quite different from that in which each individual would feel, think, and act were he in a state of isolation. A crowd is always intellectually inferior to an isolated individual, for it does not think rationally, but is swayed by the emotion of the moment. The type of thought it exhibits is, indeed, fundamentally different from the rational thought of an individual. Crowds think in images, and each image immediately calls up a series of other images having no logical connexion with the first, but associated only by analogy or some other superficial bond. Subjective and objective are scarcely distinguished, there is no logical direction of thought, and hence contradictory ideas may be simultaneously present. For a crowd nothing is too improbable to be accepted, and a suspicion transforms itself as soon as announced into incontrovertible certainty. The convictions of crowds always assume a "religious" shape, by which term

Le Bon understands blind submission to a being supposed superior, inability to discuss dogmas, desire to spread them, and a tendency to consider as enemies all by whom they are not accepted. The dominating force responsible for all these phenomena is suggestion, to which the crowd is peculiarly and characteristically susceptible.

Conway proceeds on much the same lines, but he takes "crowd" in a rather wider sense than Le Bon, to include every "set;" profession, class, or other possible congeries of people. In this sense it corresponds fairly closely to the various "social selves" of William James [11]. Conway regards the crowd as moved essentially by emotion, and contrasts this with the "reason" which is only to be found in individual thought and action.

All these observations are of great interest, both in themselves and in their bearing upon our subject, for crowds are without doubt the soil in which rumours grow and thrive, and an accurate understanding of the psychology of the crowd will probably furnish a key to at least some of the essential characters of rumour.

Much of this crowd psychology, however, is not altogether sound. The distinction drawn between the individual and the crowd is too absolute and too artificial. The doctrine that a member of a crowd exhibits intrinsically different psychological mechanisms from those he exhibits in isolation, that he becomes, as it were, a different species of animal, is crude and untrue. Crowd psychology is not intrinsically different from individual, it is simply the psychology of an individual in a particular environment, to wit, the presence of other individuals of the same species. Hence there is no more justification for the establishment of a special crowd psychology than for a "man-in-an-engineering-shop psychology" or a "man-in-a-potato-field psychology." The difference is merely one of environment, and different environments produce different reactions, whether the changes in the environment concern persons or things. The essential psychological mechanisms remain the same, although the presence of other individuals may accentuate some, and retard or inhibit others.

The fault of the crowd psychologists is not so much that they have misunderstood the psychology of the crowd, but that they have misunderstood the psychology of the individual, and have failed to appreciate that the latter shows the same type of thought as the former, though in a less obvious form. Le Bon's view that personal interest is the almost exclusive motive of an individual's conduct is a crude Benthamite doctrine which we cannot possibly accept. The statement,

again, that the conduct and thought of an individual are mainly directed by reason is opposed to the teaching of modern psychology. The emotional type of thought, which we have called "complex" thinking, holds with almost as much force in the individual as in the crowd. Genuine "rational" thinking is a comparatively rare phenomenon, and much of the thinking which we fondly imagine to be rational is in reality the result of non-conscious complexes whose action we conceal from ourselves by a process of "rationalization." The difference between individual thought and crowd thought is merely one of degree, due to the very favourable field provided in the latter for certain emotional factors which we shall afterwards define. The distinction between rational thought and "complex" thought is, of course, very real, but the line of demarcation is by no means the same as that between individual thought and crowd thought.

Among the forces responsible for "complex" thinking, a prominent place must be assigned to "herd instinct," the action of which in the psychology of civilized man has been clearly demonstrated by Trotter [17]. Herd instinct ensures that the behaviour and thought of the individual shall be in harmony with that of the community. Owing to its action the individual tends to carry out the rules of conduct which are sanctioned by the community, and to accept without question the beliefs which are current in his class. For the average man it determines his ethical code and all those opinions which are not the result of special knowledge. It must be clearly understood that herd instinct is a determining force for the major part of our individual thinking, and that it is not peculiar to so-called crowd thinking. It is a fundamental part of the psychology of each individual man, because every man is essentially a gregarious animal. Rational thinking is the only sphere in which its influence is reduced to a minimum, and genuine rational thinking constitutes but a very small part of our mental activities. It can easily be understood, however, that in a crowd the conditions are peculiarly favourable for the action of herd instinct, and that under such circumstances its influence is likely to reach a maximum. Opinions and beliefs are hence accepted more readily and with less demand for logical evidence than in the case of the isolated individual, and we should for this reason expect to find in the crowd some approximation to that entire abrogation of rationality observed by Le Bon and others. Our conclusion will therefore be that the distinction between individual thought and crowd thought is not a fundamental difference of kind, but merely one of degree. Non-rational thinking is a frequent phenomenon

in both, but it is more obvious and unrestrained in the crowd because the crowd presents conditions which are peculiarly favourable for the action of herd instinct, and herd instinct is one of the cardinal factors responsible for the non-rational type of thought.

With these conceptions at our disposal we can return to the problem of rumour, and endeavour to ascertain what relation it bears to the psychological forces at work in the crowd. This relation has been admirably analysed by Trotter [17] in his recently published "Instincts of the Herd in Peace and War," and the conclusions he reaches may be expressed as follows: Circumstances which stimulate herd instinct tend to arouse characteristic gregarious responses in each member of the herd. An increased sensitivity to his fellows is produced, and an increased tendency to be affected by, and to identify himself with, their alarms, hopes, opinions, and beliefs. We have just observed an example of this mechanism in the case of the crowd, where the stimulus to herd instinct provided by collecting a number of individuals together leads to a rapid contagion of non-rational opinions and decisions. It may further be stated that the strength of the gregarious responses produced are proportional to the strength of the stimulus to which herd instinct has been subjected, and that when that stimulus is maximal the gregarious responses will also attain to their maximum. Now war is probably the most intense of all possible stimuli to herd instinct, and above all a war like the present one, in which the very existence of the herd is seriously threatened. Hence we should expect under such circumstances a vast increase of all the characteristic herd manifestations, including an abnormal sensitivity to the opinions and beliefs of our fellows, and hence an abnormal prevalence and propagation of rumour. Trotter points out that war, in order to produce a maximal gregarious response, must be a really dangerous threat to the herd. The South African War, for example, was not such a threat, and correspondingly the activity and vitality of rumour were vastly less than in the present War. Again, the stimulus to herd instinct was at its maximum at the outbreak of war. One will remember the extraordinary camaraderie which then prevailed, and the changed atmosphere of the railway carriage and omnibus. Correspondingly, again, rumour was considerably more rife then than since.

When herd instinct is maximally stimulated, its action overwhelmingly dominates the mind, non-rational opinions are disseminated with prodigious ease, and the rational activities with their capacity for cool criticism are at a low ebb. In this way stories are accepted and

propagated by people who, in their more normal state, would at once detect their inherent improbability or impossibility. To what an absurd length this logic-tight process may go was well shown by one of my servants, a not unintelligent girl, who inquired breathlessly one morning whether I had heard the latest news, to wit, that "one of our airships was up last night and dropped a bomb on Ilford."

We have thus reached a position which enables us to understand the nature of the soil in which rumours grow, and the factors which make it so fertile in time of war. The next problem which confronts us is the consideration of the causes immediately responsible for the origin and development of rumours, and the classification of the different kinds of rumours which we actually find in existence. To continue the metaphor, we have to determine the nature of the seed which must be cast upon the soil, and the different species of plants which thereby develop.

With regard to the first point, the answer must evidently be that the causes leading to the origin and development of rumours are all those factors which we found, in the earlier part of this paper, to be responsible for the perversion of evidence. Chief amongst these was the action of complexes, which were shown to be capable both of perverting the report of an actual occurrence and of creating fictitious evidence in the shape of phantasy. It is clear, moreover, that the kinds of rumours produced will depend upon the nature of the complexes underlying them. We cannot attempt here to make any exhaustive classification of these kinds, but the following groups may be fairly easily distinguished:—

(1) *Rumours directly connected with the Threat to the Herd.*—These are the product of the tension and anxious expectation induced in the herd whose existence is endangered, with the resulting perversions and phantasies thereby generated. Such, for example, are rumours of invasion, of spies, of Germany's big guns, giant submarines, and submarine transports. In some of these, other subsidiary factors are also undoubtedly concerned, particularly political bias, whose supposed burial is obviously by no means so complete as we fondly endeavour to imagine. This is very clearly shown by the attitude adopted towards such rumours by the newspapers which have hauled down the old party labels in order to reappear under the new rival flags of government-baiters and government apologists. The subsidiary complexes which are thus enabled to find nourishment in this group of rumours constitute a link which carries us over to the second group.

(2) *Wish-fulfilment Rumours.* — These are produced by the mechanism which is so familiar to us in both normal and abnormal psychology, the creation of a pleasant world of phantasy in which our desires and longings are abundantly fulfilled. As examples we may mention the rumours of Zeppelins brought down in the next county, of submarines sunk in the next bay, and the most wonderful of all, the famous Russian rumour. Here again, of course, other factors play a part, some of which we shall mention subsequently.

(3) *Rumours due to Widespread and Fundamental Complexes.*— Certain complexes which belong to the essential psychological structure of every human being, and are therefore capable of being easily excited in large numbers of people, may, when an appropriate stimulus occurs, lead to the development and propagation of rumours. Such complexes tend to seize any likely material and to build phantasies upon it in which they attain some degree of satisfaction. As an example of a rumour arising in this way we may cite the war baby rumour, which seems to have owed its existence and growth to phantasies of an obviously sexual origin. In view of the eminently respectable character of many of the people who industriously propagated it, this rumour provides an interesting illustration of the indirect pathways by which the most efficiently repressed complexes will contrive to find an outlet. Rumours of atrocities, again, have probably at least one root in the sadistic and masochistic complexes which, at any rate in an undeveloped or repressed state, are more widespread than is generally thought. What may be called the instinct of cruelty seems to be an integral part of our nature, however much it may be concealed and repressed by our education and traditions. William James [11] has clearly developed this conception in his "Principles of Psychology," and he ascribes to the stimulation of this instinct the fascination which stories of atrocity have for most minds. It is easy to understand that phantasies built upon it may lead to the propagation of corresponding rumours.

Recent research has shown that fundamental and generalized complexes of the kind we are now considering, elementary complexes more or less common to the whole human race, play an important part in the development of myths and sagas, and it is interesting to note that the psychological processes concerned therein show a marked analogy with those responsible for the development of rumour [1].

There are certain peculiar aspects of rumour which merit special attention and analysis. The first of these is that curious impulse to pass on the rumour, to communicate it as soon as possible to a further

person, of which the existence is a matter of common observation. A closely similar phenomenon may be noted in the case of wit, the impulse which we all feel to pass on the last good joke we have heard [8]. We may compare with it, also, that propagandism which Le Bon has noted in crowds, the imperative desire to spread their opinions and dogmas. It is possible, without pretending that the analysis is in any way exhaustive, to indicate two groups of factors which appear to underlie this impulse.

The first group comprises the self-assertion or grandiose complexes, whose action we have already studied in the perversion of evidence. We noted there the desire to figure as a person of distinction, to occupy the centre of the stage, and to have the eyes and ears of our neighbours directed admiringly towards us; and it is clear that a similar feeling is obtaining satisfaction in the man who relates the latest rumour. It is instructive to note that the desire to achieve a position of importance in another person's mind is unquestionably present in cases of pseudologia phantastica, and Risch observed that his patients would only fabricate when assured of their hearer's interest. An interesting subsidiary effect of these grandiose complexes is the often observed tendency of the rumour propagator to bring the alleged events constituting the material of the rumours as closely as possible into relation with himself. Thus, when spy rumours were rife, the propagator frequently assured us that the governess with the box full of bombs had been discovered in the adjoining suburb, or in the next street, or even in the house of his cousin. The pseudologia phantastica patient would have said that he had himself made the discovery in his own house, but in the more normal man the powers of self-criticism are still sufficiently active to inhibit a phantasy of this degree, but not sufficiently active to prevent the minor perversions we have described. The Russian rumour provided plentiful illustrations of this process, and there were few of us who had not an aunt or a "friend in an influential position" who witnessed the travels of those wonderful troops.

The second, and probably the most important, group comprises the factors directly connected with herd instinct [17]. We have observed that this instinct, when suitably stimulated, causes the individual to seek to identify himself with the herd, and to take a part in the promotion of the herd's welfare. If this desire can obtain adequate satisfaction, the longing and unrest produced by the promptings of the instinct are at once allayed. This effect is characteristically seen in the peace of mind and freedom from worry of the man who has finally

decided to join the Army. The desire to identify oneself with the herd, to be "in it," and to play a part in its activities and strivings may easily be discerned in the propagator of rumour, and is clearly one of the factors underlying the impulse to communicate it.

Another peculiar aspect of rumour to which we desire to direct attention is the fact that it frequently exhibits a generic character—that is to say, rumour tends to assume a particular shape, which constantly appears whenever the circumstances are favourable. Thus when the Germans invaded France a rumour was immediately spread throughout Germany that the French had poisoned the wells. Similar rumours have appeared on various subsequent occasions during the present War, and have been current in former wars whenever an invasion has taken place. Of course, we are not in a position to say how much truth these assertions have contained, but their regular appearance at least arouses our suspicion. Similarly, rumours of atrocities have always tended to assume certain fixed forms. We may mention, for example, the rumour that many Belgian children were in this country whose hands had been cut off. Lastly, the best example of the generic character of rumour, whose very obviousness tends to prevent us appreciating its significance, is the circumstance that all the rumours of recent times are concerned with the War.

We are unable to present any completely satisfactory theory to account for this generic aspect, but there are certain considerations which will at least cast some light upon the question. To begin with, the fact that present-day rumours always concern the War indicates that rumours will only arise in connexion with the subject which has bound the herd together, and stimulated to their maximum degree all the forces of herd instinct. Hence in the case of the War they will tend to fall into forms which minister to the aggressive or defensive activities of that instinct, and these forms will naturally be fairly limited in number.

A further important factor in producing the generic character of rumours is the previously mentioned circumstance that the causal mechanisms fall into certain groups and thereby generate rumours of corresponding types. The last of these groups, the action of wide-spread complexes of a fundamental kind, would seem to be particularly important in this connexion. The identity of form shown by myths and sagas developed in remotely separated countries has been shown by recent research to be ascribable to their origin from complexes of primary importance which are common to the whole human race.

It is clear that this generic character in myths and sagas is closely allied to that which we are now considering in the case of rumour, and we are therefore justified in assuming that the same mechanism is probably responsible for both.

One group of rumours, those concerned with atrocities, deserves special study in this respect. It is easy to discern in some of them the action of sadistic phantasies. Stories of rape and the mutilation of women must obviously be sometimes due to this cause, and the circumstances of their origin would explain their stereotyped character. On the other hand, it is important to realize that sadistic complexes tend, not only to produce rumours of atrocities, but to express themselves in action, and to produce actual atrocities. Owing to the removal of inhibitions, always found in mobs, and certainly not least in a sacking army, we should expect these complexes to find in such circumstances an opportunity for active expression. When, in addition, the army has been bred in traditions which Mr. Trotter, in his recent book, has aptly compared with those of the wolf-pack, the opportunity for such expression is likely to be exceptionally frequent.

To this consideration we may appropriately add some concluding remarks with regard to the aims and limits of the present investigation. No attempt has been made to approach the interesting and important problem of the methods by which the perverted elements in evidence may be distinguished from those which are accurate. It is very obvious that reports are not always false, and that even rumours sometimes have a substantial basis in fact. No doubt it will ultimately be possible to devise criteria by which the wheat may be separated with certainty from the chaff, and the products of phantasy from the genuine results of observation. Law has long laboured to establish such criteria, and has evolved a procedure which is perhaps as satisfying as it is possible now to achieve. There can be no question, however, that this procedure is far from perfect, and that in it due weight is not given to factors which are obvious to the psychologist. We may reasonably expect that psychology should take a hand in the task, and provide the lawyer with information and with principles which will help him to improve the methods he now employs.

In the present paper, however, no such ambitious programme has been entertained, and the question of determining what is valid evidence and what is not has been entirely omitted. So far as rumour is concerned, the material selected has consisted solely of reports which have been subsequently admitted to be essentially false, because the problem

aimed at has been the ascertaining of the psychological mechanisms by which such false reports come into existence. How far other reports—reasonably authenticated reports of atrocities for example—are true is a question of a totally different kind, and one to be solved, not by arm-chair speculations, but by a judicial investigation.

Even with these limitations the conclusions reached can only be regarded as tentative, for the subject and its ramifications are extraordinarily complicated and involved. I can only claim to have touched the borders of a vast field, and perhaps to have suggested some likely paths along which the future explorer may attain more complete results.

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DISCUSSION.

Sir GEORGE SAVAGE: I have been much pleased and impressed by Dr. Hart's paper. It approaches the subject of rumour in what I may call a natural way. First he has considered evidence and the various causes which may strengthen or weaken it. I shall not speak on this part of the paper, but I was really delighted to find that Dr. Hart had treated rumour in a parallel to the psychology of the crowd. I have had interest in this, especially as developed in the book of Martin Conway. The contagion of feeling seen in both is eminently characteristic, and so also in both is the unreason which so generally appears. The probability of the truth in the one case, and the probability of justice being done in the other, are equally doubtful and from similar causes. The relation of untruth to developing children has always interested me, and, when asked, some years since, at a meeting which I had addressed on the evolution of the moral sense in children, how, on the evolutionary theory, I could explain the lying habit so common in children, I said that just as exuberance of vitality and muscular health led them to stand on their heads, so exuberant nervous vitality tended to overgrowth of the imagination for a time. The whole paper is so full of points of interest that time is needed to digest and utilize them.

Professor T. P. NUNN: All I have to say by way of comment on Dr. Hart's very interesting and valuable paper is that I was glad to hear him emphasize the results of Stern and others with reference to the unreliability of children's evidence. Not long ago I had occasion to be present during the police-court proceedings against a professional man charged with what the newspapers call "a serious offence." The important evidence was all given by boys aged from 9 to 11 or 12, and, taken at its face value, was distinctly incriminating. To me, however, the boys' statements seemed to show unmistakable signs of suggestion, which I had no difficulty in attributing to the well-intentioned influence of the energetic detective who had made the first inquiries into the case. The presence of suggestion was so clear in respect of the more serious of the two counts against the accused that the magistrates dismissed it. In respect of the other count the unfortunate man was committed for trial, though he was ultimately acquitted by the common-sense of a jury. My observations of this case have convinced me that persons accused of crimes of this kind may often suffer serious injustice in the absence of special precautions against the high suggestivity of children.

The PRESIDENT: I thank Dr. Bernard Hart for his very interesting paper. Rumour is defined in Webster's Dictionary as "Flying or popular report: a current story passing from one person to another without any known authority for the truth of it." But rumour is also used as a report of a fact, a story

well authorized, and the quotation given in this respect is "This rumour *of Him* went forth throughout all Judæa and the region round about." Since rumour thus used in this passage might be inferred to imply the former definition of the word, it is not surprising to find in the Revised Version of the Bible, "This report *of Him*," &c. Maudsley, in his work "Natural Causes and Supernatural Seemings," says it is hardly possible for those who have not made a study of the subject to realize how many and great events have been thought, nay seem, to happen, not because they ever did happen, but because of the strong wish and belief that they would happen. This explains the psychology of the great Russian myth to which Dr. Hart has alluded. But other sentiments play an important part, notably vanity and a desire to excite wonder and surprise in others and so to get talked about. A false report sometimes arises from erroneous observation, either because the individual is incapable of interpreting the sensations received—that is to say, there is error of perception—or because complete opportunity of observation is not available. A rumour starts by the individual telling to others a report, perhaps at first with due caution; but finding, however, that it is believed, any doubts he may have had tend to disappear, his vanity is excited, and he allows his imagination to embroider his original statement; or, if he does not himself do this, others to whom the report has been told will, for similar reasons, spread the false report, and so it passes from one person to another "without any known authority for the truth of it." It was widely believed that among the Belgian refugees in this country were children whose hands had been cut off by the Germans; that the "Huns" are capable of such frightfulness has been amply proved, and accordingly the false report, once having started, spread "without any known authority for the truth of it," as was subsequently proved by an American, who offered to build a hospital if a single case could be produced. A newspaper man came to me and said that he had heard we had a case in the hospital; I have no doubt he went fishing round in this way for copy, and thus the rumour was spread far and wide. An hysterical nurse was prosecuted for fabricating horrors which were widely believed as they found their way into the daily press. Visual hallucinations in all ages have played a dominant part in the psychology of rumour, and the vision of the angels of Mons and the controversy it has excited in the newspapers only show that human nature does not change, and "collective credulity" regarding visions still plays an important rôle of influence on the social mind.

Mr. J. C. FLUGEL: Dr. Hart has dealt in such an admirably systematic manner with his subject, and has covered so much ground in his paper, that it would seem that the chief direction in which further progress is to be made lies in that of a deeper and more searching investigation into the *precise* psychological origin and meaning of particular rumours. The actual tracing of the exact circumstances of the origin of a rumour is usually a matter of extreme difficulty. The most that can be done in many cases is a careful collecting, sifting, and criticism of available data from a comparatively small number

of individuals who have helped to give rise to or (more often) to hand on the rumour. Preliminary reports on investigations along these lines have recently been published in the *Journal of the Society for Psychical Research* as regards the "angels of Mons" and the "Russian" rumours. They seem to indicate that fully developed rumours such as these are often brought about by large and frequent distortions of memory working upon a small residuum of distorted perception in the case of a few individuals from whom the rumours presumably took their rise. Even in the absence of such investigations, however, it may sometimes be possible to obtain a deeper and fuller knowledge of the more hidden of the motive forces underlying a rumour by the application to the content of the rumour of the results of psycho-analytic work on individuals and on myths and sagas. Many of the details of rumours will then probably be found to be determined by deep-lying trends and fancies that are already familiar to students of the unconscious and its manifestations. As regards the influence of the crowd and of the gregarious tendencies upon the development of rumours, it must be borne in mind that it is seldom the influence of the crowd in the narrow sense that is at work, but rather some one or more of the more subtle far-reaching manifestations of herd and instinct to which Mr. Trotter has recently drawn attention, for it is not, as a rule, in crowds and assemblies that rumours are propagated, but rather "when two or three are gathered together" in the street, at the back door, in the smoking room, or in the train.

Mr. J. HERBERT PARSONS: I have learnt much from this extremely lucid paper. If I may offer a minor criticism, it appears to me that Dr. Hart shows a tendency to under-estimate the importance of group mentality in the natural recoil from the somewhat crude views of Le Bon and others of his school. The French school of psychologists, headed by Durkheim, have brought forward much evidence in favour of communal thought in primitive races, and it is interesting and instructive to examine the individual mind as a derivative from the group mind. I wish to emphasize the extraordinary opportunity which present conditions offer to psychologists for constructive work.