

تلخيص مقال الدكتور جوده ريسم مدرس الفلسفة بجامعة فاروق الأول

الأخطاء في نظر مدرسة التحليل النفسى ومنهج البحث عن قانونها

مهما اختلفت الآراء فيما يختص بنظرية التحليل النفسى العامة فيكاد جميع علماء النفس يقبلون ما تذهب إليه مدرسة فرويد في تفسيرها للأخطاء اليومية والهفوات غير المقصودة وعرثات اللسان وحالات النسيان التى تبدو عرضيه ثانوية . وفى هذا المقال يحاول الدكتور ويسدم إرجاع هذا التفسير إلى قانون واحد ومناقشة عناصر هذا القانون ومقوماته وما يتضمنه من مسلمات وفروض . كان التفسير الشائع لهذه الأخطاء قبل دراسة فرويد لها مقصوراً على ظروف حدوثها بدون الإشارة إلى ما تتضمنه من دلالة نفسية . ومن الممكن الكشف عن دلالة بعض الأخطاء عن طريق الملاحظة الذاتية واعتبار الدلالة النفسية احدى علل هذه الأخطاء .

غير أن هناك أخطاء أخرى لا يمكن الكشف عن دلالتها بالملاحظة الذاتية ولا باستخدام الاستدلال بالمثالة . وقد يؤدى التحليل الذاتى عن طريق تداعى المعانى إلى الوقوف على ما لبعض هذه الأخطاء من دلالة عليية . أما فى الحالات الأخرى فيكون من المحال اللجوء إلى التحليل الذاتى ويصح فى هذه الحالة استخدام الاستدلال بارجاع كل حالة جديدة إلى ما يشابهها من الحالات التى سبق تحليلها .

ويوجد إلى حد ما وجه شبه بين قانون الأخطاء التحليلى والقوانين الطبيعية . وفى هذه الحالة تعتبر الدلالة وهى عادة صراع بين عدة عوامل علة ضرورية لتفسير الخطأ ولكن لا يمكن اعتبارها علة كافية ، إذ أن الباحث بصدد عدة آثار من المتعذر إخضاعها لقانون .

وللكشف عن هذا القانون لا بد من تحقيق احدى هذه الحالات الثلاث (١) إمكان التنبؤ (٢) الوقوف على كيفية حدوث الخطأ (٣) تطبيق القانون المفترض فى دائرة جديدة غير دائرة الظواهر التى مكنت دراستها من الاهتمام إلى القانون . وهذه الحالات الثلاث يمكن تطبيقها فيما يختص بعثرات اللسان والهفوات ، الأمر الذى يرجح فاعليه الدلالة فى إحداث الخطأ ومن ثم احتمال صحة القانون . وتتميز علة عثرات اللسان والهفوات عن غيرها من أنواع السلوك التى ترجع إلى صراع بين رغبتيين بأن فى الحالة الأولى تكون احدى الرغبتين شعور والأخرى لا شعور ، فى حين تكون الرغبات المتصارعة فى الحالات الثانية لا شعورية .

وبعد أن ناقش المؤلف طويلاً كيفية تطبيق المنهج الاستقرائى فى دراسة الأخطاء وصلة قانون الأخطاء بنظرية التحليل النفس ، يقرح القانون الآتى لتعليل الأخطاء : الخطأ ضرب من الترضية ، دلالة عبارة عن صراع بين قصد شعورى وآخر لا يمكن كشفه بالملاحظة الذاتية فى أثناء حدوث الخطأ ، وتعتبر هذه الدلالة علة ضرورية وكافية لإحداث الخطأ .

physics. Its probability can reach this height only by applying the general theory of psycho-analysis to examples that do not yield to auto-analysis, provided the general theory can be given a satisfactory methodological basis.

Thus the law has a high probability independent of the general theory, and may have a probability approaching certainty if aided by that theory; and at the same time it can give logical support to the general theory.

The law may be formulated as follows :

The mistake is a compromise-formation, which has a meaning consisting of a conflict between a conscious intention and an intention that cannot be introspected at the moment when the mistake occurs, and the meaning is a necessary and sufficient cause of the mistake.

the frequency of success would be .95 or more. Of course the probability of a natural law in physics differs from certainty by less than one in a million. The law of mistakes would have the same probability if the general theory of psycho-analysis were placed upon a satisfactory methodological footing and applied to slips that are not susceptible of auto-analysis.

§ 20. The foregoing conclusions may now be summarised. Previous explanations of mistakes deal, at most, with opportunities for making slips; they miss the factor of psychical meaning. Some slips introspectably have this meaning and it is introspectably a causal factor. Others have not, and no argument by analogy can be used. Of these, some can be found to have a causal meaning by auto-analysis, using the technique of associated ideas. The rest cannot be investigated in this way, but analogy may be used. The psycho-analytical law of mistakes now bears some resemblance, though this is not complete, to the natural laws of physics. Meaning is then probably a necessary cause, but is it sufficient? The situation is one of plurality of effects, out of which it is difficult to make a law. To do so, it is necessary to be able to make predictions, or to trace a mechanism, or to apply the supposed law outside the sphere of its original data; with slips these are all possible, which increases the probability that a meaning is a sufficient cause of a mistake (and therefore also the probability of the law). What distinguishes the cause of a slip from that of other behaviour supposed to have a conflict-meaning is that with the former one of the conflict-factors is conscious and the other non-introspectable; whereas with the latter neither is introspectable. With regard to the determination of what particular slip will occur, granting that meaning is sufficient, the detailed factors are found by analysis, but nothing general can be said about them.

Some of the more important concepts of the general theory of psycho-analysis can be derived from the law, so that, with such probability as it has, it can lend support to the general theory. In using the law to give this support there is no circle in the reasoning, provided it is restricted to examples that are capable of auto-analysis.

If the law is taken to be quite general, it has a very high degree of probability, though not so high as that of a natural law in

else to base it upon the general theory, so that we shall lose its support for that theory — unless we are prepared to use it as support and thus argue in a circle?

It was made clear above that an argument in a circle would result if we used the general theory to support the law with regard to errors whose meanings could not be directly introspected. But later we found a class of slips, susceptible of auto-analysis, that could be described as indirectly introspectable, like that of the forgotten word "Pond"; and these suffice to give the support required for the general theory, so far as they lead to some of the important mechanisms and features of the mind that dominate the general theory. We shall not, therefore, be arguing in a circle, if we use the law of mistakes, restricted to slips that are capable of auto-analysis, as a support for the general theory, and afterwards apply this theory to slips that cannot be investigated by their authors.

After investigating the methodology of the general theory, we may be able to conclude that the law of mistakes is quite general, and this is part of what we wish to know; but in the meanwhile we can conclude that some slips whose meaning is not directly introspectable have a causal meaning, and this fact gives logical support to the general psycho-analytical theory.

With regard to the degree of probability attaching to the law, subject to the limitation here imposed upon it, we must agree that it possesses the same extraordinarily high probability as that possessed on the average by any natural law in physics. But without the limitation, *i. e.* if the law is taken to be absolutely general, its probability is less high, prior to obtaining support from the rest of psycho-analytical theory. It is nonetheless very high; it would be lower were it not for the support given by the analogy from examples of auto-analysis to those incapable of this, the support derived from our knowledge of the mechanism of slips, and the support gained by applying the law successfully to faulty recollections. These statements about probability are intuitive, but an empirical test could be carried out by calculating the frequency of successful analyses of errors among attempts made by competent analysts. In view of the large numbers of examples that have in fact been examined and successfully interpreted, it would not be surprising, if certainty is measured by 1, to find that

to discuss methodologically the sense in which forgotten experiences "exist"; but enough has been said to show that the law of mistakes leads to other concepts of deep psychological importance in the general theory of psycho-analysis, and the law therefore gives some introduction to and support for that theory.

§ 18. Another presupposition is that of *unconscious causation*, or, if we prefer it, of *psychical determinism*. This means at least that some mental changes have causes in the same way as in physics. We may or may not believe that causation in physics consists of regular conjunction of events; we may or may not believe that such conjunctions, whether due to necessity or merely factual, are only approximately met with; but whatever our view of it in that field may be, we must take the same view of it here. The point is simply that some postulate of *orderliness* is needed in any science if laws are to be framed. Naturally the additional methodological problem arises of deciding between what kinds of mental events the causal relation holds; but that, too, is outside the scope of the immediate discussion.

The law of mistakes can also be seen to presuppose other features of the unconscious, *e.g.* that of *resistance* to analysis, that of the impulses seeking expression and that of the forces preventing this.

§ 19. The situation so far is a complex one in which the law of mistakes is methodologically established for certain classes of slips, and a fairly strong analogy has been found to exist between examined instances and unexamined ones. Nonetheless this analogy is not enough: for, with a natural law in physics, it is always open to a physicist to check it for interpolated instances, which may in fact never have been previously tested; but, *ex hypothesi*, there are instances of mistakes that *cannot* be tested by the method of associated ideas as described above—there is a limit to which interpolation is possible.

Applied to such slips there is no methodological justification for the law within the domain of the treatment of slips alone.

Investigation of their meaning is possible only by the full technique of psycho-analysis, carried out by an analyst and not by the author of the slips; and this requires the methodological justification of the general psycho-analytical theory.

Are we, then, condemned to an incomplete law of slips or

this, because the concept introduces further methodological complexities. I have used phrases like "forgotten experiences" and "the recollection of forgotten experiences" and have not spoken of "experiences in the unconscious" or "unconscious memories". The reason is that the phrases used express what is within the introspectable knowledge of anyone, and to say that experiences can be unconscious adds nothing at this stage to our understanding of the mind, for it merely tells us what is familiar in the guise of a terminology, which suggests we have learnt something new when in fact we have not. In the foregoing account the word "non-conscious" would have been appropriate, but now the point is reached where forgotten experiences must be regarded not merely as non-conscious but as, in a special sense, unconscious. It is plain that *forgotten experiences have a tendency to express themselves*—if not directly then in a roundabout way. This may be described by saying that *though forgotten they exist in some sense and are active or dynamic*. If the concept of the *unconscious* is introduced at this stage, it will be to express this feature of activity. Many non-analytic psycho-therapists even still speak of the "subconscious", by which they seem to mean something like the conscious but below the level of it, and they seem to feel they are avoiding a self-contradiction which they attribute to the word "unconscious". The word "subconscious" altogether distracts the attention from the *activity* of the unconscious and also from the important fact that what is unconscious is rendered so by strong psychical causes—whereas to say something is subconscious suggests that it is somewhat weak or just non-conscious.

To say, then, that there is unconscious activity or that forgotten experiences are active is not to say something unintrospectable. It is a way of summarising the following facts: when an experience is forgotten and a slip is made, (i) the experience is part of the meaning and cause of the slip, (ii) faulty recollections of the experience are manifestations of this meaning, (iii) the unpleasure caused by forgetting is less than the painfulness of the experience and in general less than the painfulness of remembering the experience, and (iv) the forgotten experience tends to express itself. To the first three of these "non-conscious" is appropriate, but for the fourth "unconscious" is needed. It would be going too far afield here to discuss whether the concept of unconscious activity is more than a mere description of what is open to introspection and

law of mistakes, or psychological discoveries that arise out of of it.

So far as slips are concerned, forgetfulness is a means of lessening unpleasure. This result naturally gives rise to the question: how is a painful experience or wish remembered if its painfulness is a cause of its being forgotten? In particular, how did Frink recover the memory of his childhood experience? The answer according to the general theory of psycho-analysis is a complicated one, which it would be irrelevant to discuss here; but whatever may be the deeper nature of the mechanism, we may even at this stage form a hypothesis about its general character. The process by which a painful experience is recalled is gradual; in point of time it has several stages. In this way the degree of unpleasure felt at any stage is less acute than the degree attaching to the experience on its original occurrence. We must suppose that, when Frink was reflecting on "Pond", the associations about baseball pitchers and water produced some slight degree of unpleasure, likewise with those about the nickname "pig", and finally with those about the farmer's cruel treatment of the two pigs and their sinking in a well; and we must suppose that the successive feelings of unpleasure at successive times are not cumulative, so that the total unpleasure felt on remembering the forgotten experience is a *series* of unpleasures but not a *sum* of unpleasures. This may be illustrated by the successive extraction of teeth: the pain of having three teeth out (without an anaesthetic) is not three times that of having one removed (though doubtless there will be a sense of exhaustion greater than would have arisen from a single extraction). Thus, whatever technique is used to bring to mind a forgotten experience, it must permit of unpleasure being experienced by stages.

It seems reasonable to suppose that this hypothesis can be confirmed by introspection. Thus when Frink remembered his boyhood experience, he could have introspected the unpleasure of the recollection and introspect the fact that the experience had been of a certain degree of unpleasure; and it seems likely that he could have told by introspection that the two unpleasures were different in intensity.

§ 17. The psycho-analytical law of mistakes also presupposes the concept of the *unconscious*. The foregoing methodological examination has been conducted without reference to

need to consider failure to forget: all that is required is to see that the pleasure-unpleasure law holds with things that actually are forgotten. Apparent exceptions to this law have been mentioned here only because they often make intelligent people sceptical about the law; but in fact other methodology difficulties are more serious.

§ 15. Enough of the mechanism of slips has been described to render the law of mistakes methodologically satisfactory. But supporting evidence can be found, for the law is capable of being applied more widely than in the field from which it was educed.

When trying to recall a forgotten name by allowing ideas to float into consciousness without deliberate direction, various wrong names appear or ideas that seem to have no relation to the forgotten word. If the law of mistakes can throw some light on these substitute-ideas or names, it will gain in strength.

With the "Pond" example, the ideas that came were not substitute-names but situations. Now, from the discussion of it given above, it is obvious that the several ideas, such as baseball pitcher and pig are related to the meaning of the whole situation, or to part of that meaning, in the same way as the forgotten word "Pond" itself. The meaning-cause of the error therefore accounts not only for the lapse of memory but also for the ideas to which the forgotten word gave rise.

With regard to substitute-names, several examples will be found in Freud. There is a very ingenious one concerning a forgotten name¹ and another equally subtle concerning a combination of a forgotten name and a slip of the tongue in the same sentence². By means of the law of mistakes he was able to explain the wrong syllables of the substitute-names that came in place of the correct ones. Such examples are unfortunately rather long to reproduce.

There is, therefore, additional confirmation of the law because it can explain not only the mistake to be investigated but also the substitute-ideas that arise in the course of the investigation. It should be noted that these substitutes are also mistakes. *Thus the law covers not only forgetfulness but also faulty recollection.*³

§ 16. Our subject now turns to the presuppositions of the

(1) Freud, *P. of E. L.*, pp. 10-4. (2) *Id.*, pp. 17-21. (3) *Id.*, p. 9.

Freud notes that the avoidance of pain underlies the conflict of intention. This should not, I think, be described as a *motive*, at any rate not as a motive on the same level as ordinary ones. We may say correctly that the compromise-formation manifests two motives; and that the interplay of these is governed by a pleasure-unpleasure law of the mind not yet methodologically considered; but, without considering the general validity of this law, we may agree that slips at any rate occur in accordance with it, simply on the grounds of introspective verification.

The mechanism or errors can be sufficiently well understood in terms of conflict of intentions operating to reduce unpleasure. It is true that the mechanism can be further explored, but it is not necessary to do this for immediate purposes, and it will be more convenient from the methodological point of view to deal with additional details under the heading of presuppositions of the law of mistakes.

With regard to errors that consist of forgetting things, if they are forgotten because it would be painful not to forget them, the question is bound to arise: why do we not always forget painful things? Consider the following error. A young man lost a pencil that he valued highly. A few days before, his brother-in-law had written him a letter concluding, "I have neither time nor inclination at present to encourage you in your frivolity and idleness", and it was this brother-in-law who had given him the pencil.¹ Should we not, then, expect him to forget the loss of the pencil? The loss of the gift means a defiant wish to be independent of the relation's goodwill; but the full realisation of this would be more painful than the loss of the pencil; hence this loss, though painful, covers up a still more painful experience—and indeed the loss has the additional advantage of inflicting a kind of punishment felt to be deserved.² In general a painful idea is remembered in order to interfere with the memory of something still more painful.

Now this statement has the sort of generality attaching to any natural or causal law, and the methodology of it therefore requires attention if it is to be included in the mechanism of the law of mistakes. This rigorous approach need not taken, however, because in relation to that mechanism there is no

(1) Freud, *Op. cit.*, p. 42. (2) *Id.*, P. 62

regard the meaning, even with slips of the tongue, as sufficient, as well as necessary, conditions. Though this can rarely be verified, the extension by analogy is to examples not of a different kind but of a kind that is merely too complex to investigate in practice, and in this there is nothing methodologically objectionable.

A remark should now be made on the schema given above for the plurality of effects. With bomb-blast, X is necessary but not sufficient: the factor of an open space, let us say, might cause the blast to move *away from* the building where windows were blown out, and the factor of near-by buildings might cause it to move *towards* the windows and blow them in. The surrounding conditions, A B, A' B', might easily be insufficiently analysed, so that A B, A' B', in one case contained in common the factor of an open space, while in another they contained the factor of near-by houses; for, at a stage of science where we have some knowledge but seek more, we cannot know that X, A, B, E, and so on, are simple. There is also the possibility that ξ would be a determinant. With mistakes, A B and A' B' might refer to features of the error-situation, the attitude to which was a factor in causing a mistake; but the attitude would then be part of the meaning of the slip. We may, therefore, regard X as containing all the attitudes or factors relevant to the slip, and seek in the details of X the factors determining the occurrence of one slip rather than another.

§ 14. The method of prediction, when used without a knowledge of an underlying mechanism, is of some value but is not wholly satisfactory — its success might, for example be due to chance. Russell tells us he "once met a Christadelphian who held, on grounds derived from the Book of Revelation, that there would shortly be trouble in Egypt. There was. His belief was true but not knoweldge".¹ However, the mechanism of the occurrence of slips is largely known. An error is a compromise-formation due to a conflict of intentions, one of which is not introspectable when the error occurs.² Now

(1) Bertrand Russel, *An inquiry, into Meaning and Truth*, London, 1940, p 227.

(2) for the deeper aspect of the mechanism of one class of mistakes see Ludwig Eidelberg, "A Contribution to the Study of Slips of the Tongue," *The International Journal of Psycho-Analysis*. Vol XVII, London, 1936; and "A Further Contribution..." , Vol. XXV, 1944. These aspects invorle the full procedure of psycho-analysis and therefore must be excluded from the present discussion.

Here the prediction was made without reference to the mechanism involved, which renders it weaker than if it had been based upon the mechanism. Subject to a restriction upon the probability of the conclusion, therefore, we may claim that the meaning underlying the unhappy ending must be identified with that causing the slip and must be regarded as a *sufficient* condition for this: that is to say, there is a good probability that meaning is a sufficient cause of mistakes, even though we do not know what is the decisive factor that brings about one slip rather than another. Then, probably, meaning is a necessary and sufficient condition of the occurrence of a mistake.

It must be stressed, however, that meaning is a sufficient condition only when a slip actually occurs; but it may not be sufficient to produce a slip, for the meaning can express itself in other forms of behaviour. The difference between mistakes and other behaviour seems to be due to a difference in the nature of the conflicting intentions composing the meaning. With slips one of the intentions is conscious and the other is not introspectable; but, with other behaviour that may be supposed to have a meaning composed of conflict, neither of the conflicting elements is introspectable. To say, then, that meaning can be a sufficient condition for the occurrence of a slip is to say that no factor other than meaning is necessary; but it is not the same as to say that meaning must produce a slip. The plurality of effects, which is involved here, is from the methodological point of view harder to handle than the plurality of causes. But this does not deny the supposed conclusion, which interests most people, that slips are always due to causes consisting of meaning — if our difficulties arose from the plurality of causes instead of the plurality of effects, this conclusion would be untrue.

With slips of the tongue, for instance, it is difficult to know in advance enough about the factors involved in order to predict an error. It is true that if we over-exhort a person not to say something he is likely to say it, against, of course his will¹. Thus if we make a playful alteration in a man's name, which has an unfortunate appropriateness, there is considerable danger that we shall address him by the manipulated form of the name. It seems justifiable, therefore, to

(1) Freud, *I. D. on P. A.*, p. 42.

study the criteria for the completion of analytic therapy, not to mention the methodology of the general theory. How, then, can we verify that X is connected with E?

§ 12. The answer is that *we must either be able to base a prediction upon the supposed connexion between E and X, or be able to trace the mechanism by which X produces E*. These alternatives will naturally go together as a rule, that is to say, the first cannot in general be done without the second, and the knowledge of the second will in general give the power of carrying out the first; but there are some occasions when correct predictions can be given without knowing the mechanism. Support can sometimes be given in a third way when the mechanism is known, if it can be applied in another field.

§ 13. The natural way to verify the law of mistakes would be to make a prediction that a certain person in certain circumstances would make a slip. In general it is impossible to do this, as we should not have access to the details of his psychical processes — and if he were subjected to the exhaustive psycho-analysis required to give us this knowledge he would *ipso facto* be unlikely to make the slip.

With certain cases, however, a prediction can be made. Freud records numerous instances in which he was forced to recognise that he would be unable to carry out certain actions of conventional courtesy without giving himself away. In a certain instance he had good reason to suppose he would be unable to remember to send off a congratulatory telegram;¹ here the meaning is associated in advance with a definite mistake. Subsidiary evidence can be obtained from a prediction of some pattern of behaviour, where this behaviour is based upon a slip. Thus Freud heard a newly married young woman laughingly relate that on returning from her honeymoon she had gone shopping with her sister, when suddenly she noticed a man across the street and said, "Why, that is surely Mr. L." She forgot that for some weeks this man had been her husband. Freud records: "I was chilled at this tale, but I did not dare draw any inferences. The little story came back to me only several years later, after this marriage had ended most unhappily."²

(1) Freud, *P. of E. L.*, p. 108.

(2) *Id.*, p. 135.

For brevity I will reduce this to

$$\begin{aligned} \text{(i) } \xi X A B \longrightarrow E \quad \& \quad \text{(ii) } \xi X' A B \longrightarrow \bar{E} \\ \xi X A' B' \longrightarrow E, \quad \xi X' A' B' \longrightarrow \bar{E}; \\ \text{therefore probably } X \longrightarrow E. \end{aligned}$$

This schema fits the situation in which the blowing out of windows (E) is found with the explosion of bombs (X); where bombs do not explode, (X') we do not find windows blown out. But we can also have

$$\begin{aligned} \text{(i) } \xi X A B \longrightarrow E' \quad \& \quad \text{(ii) } \xi X' A B \longrightarrow \bar{E}' \\ \xi X A' B' \longrightarrow E', \quad \xi X' A' B' \longrightarrow \bar{E}' \\ \text{therefore probably } X \longrightarrow E'. \end{aligned}$$

Here E' may be the blowing *in* of windows. Thus we have a plurality of effects.

But, if we see reason to connect the motion of the moon and also the phenomenon of the tides with gravitation, we have only

$$\begin{aligned} \text{(i) } \xi X A B \longrightarrow E \quad \& \quad \text{(ii) } \xi X A B \longrightarrow E' \\ \xi X A' B' \longrightarrow E, \quad \xi X A' B' \longrightarrow E'. \end{aligned}$$

We cannot remove the motion of the moon or tides, nor can we remove gravitation, so that the negative part of our criterion is missing. Presented with this schema, methodologists would usually infer, as Stebbing did¹, that E was *not* connected with X, which is obviously incorrect, because there is a plurality of effects. What, then, are we to do with such a schema? How shall we explore the possibility that both E and E' are connected with X? This is the vital question for the law of slips, for slips can be represented by E and their underlying meanings by X, while E' can represent other behaviour manifesting X. The schema just given is in fact a symbolic representation of all the evidence we have so far collected upon which to base the law of slips: the position of slips and meaning is like that of the tides and gravitation and unlike that of broken windows and exploding bombs — we cannot fulfil the negative part of the criterion. It is true that the experience of those that have undergone the process of psycho-analysis seems to be that they make fewer slips; but to make methodological use of this fact we should have to

(1) *Id.*, pp. 327-8 (Special Principle I).

supposing it sufficient. Thus the professor might have exuded his high opinion of himself by his manner alone without committing a slip, and the same would hold of the detailed features. Could we not, however, advance so far with the analysis of the meaning as to be able to claim that the total of the features found would constitute a sufficient condition? That would seem to be a theoretical possibility; but has it any methodological justification? Let us consider the matter schematically.

§ 11. Mill has left us five time-honoured canons, for the most part honoured in the breach by scientists, for determining causal connexions. Since there was more wrong than right with them, an attempt was made by Stebbing to replace them by four new ones.¹ These are more fruitful, but they seem to be unsatisfactory in some respects, the chief of which is that they do not take explicit account of the distinction between the necessary and the sufficient or of the plurality of causes and plurality of effects.

Her second criterion may be expressed as follows:—

In a given situation, if a certain factor X is always accompanied by a factor E, no matter how the remaining factors and their combinations differ; and if, when one or more of these combinations is conjoined with a factor other than X, E does not occur, then it is probable that X is causally connected with E.

To discuss this, let X, X' be supposed causes; E, E' suppose deffects; A, A', B, B' other factors supposed irrelevant; ξ the possible presence of a wholly unsuspected factor; $\bar{E}$, $\bar{E}'$ stand respectively for the absence of E and absence of E'; and let $\longrightarrow$ mean "is found with".

Stebbing's criterion, amended by adding the factor ξ , may now be expressed in the following schema (which has more neatness and symmetry than most scientific experients warrent):-

$$\begin{array}{ll}
 \text{(i) } \xi X A B \longrightarrow E & \& \text{(ii) } \xi X' A B \longrightarrow \bar{E} \\
 \xi X A' B \longrightarrow E & \xi X' A' B \longrightarrow \bar{E} \\
 \xi X A B' \longrightarrow E & \xi X' A B' \longrightarrow \bar{E} \\
 \xi X A' B' \longrightarrow E, & \xi X' A' B' \longrightarrow \bar{E}; \\
 & \text{therefore probably } X \longrightarrow E.
 \end{array}$$

(1) L. Susan Stebbing, *A Modern Introduction to Logic*, London, 1933, pp. 326-31.

conclusion closely resembles an inductive generalisation, which can never be absolutely certain, but which can have a high probability; his view is therefore no more divorced from certainty, it might be held, than any natural law of physics. It is unreasonable to ask for a proof that *all* slips have meaning just as it is unreasonable to ask that a generalisation in physics should be completely certain, and we know in both cases that the probability is extremely high, so high indeed as to be almost equivalent to certainty. Further, with regard to errors that we attempt and fail to investigate, it might be held that they are in no worse a position than experiments in physics that go wrong. Thus with simple apparatus it is almost impossible to get a good result when demonstrating Charles's law of gases or finding the latent heat of steam. But the physicist always takes the view that the experiment was faulty and blames either the apparatus or the experimenter's skill. It would be irrelevant here to discuss the validity of this — almost high-handed — procedure; but it is just as valid in psychology as in physics and no more invalid in the one than in the other.

Thus, we have some reason for supposing that there exists a causal law that slips are caused (at least in part) by their meanings; and that this law has a degree of certainty of the same order as that possessed by any other natural law; but further scrutiny is required, and will be given to these points later on.

§ 10. It would be difficult to claim that meaning discovered was a *sufficient* condition of a slip, because psychological investigations do not suffice to show that just that particular slip and no other must have occurred. The meaning shows certainly the *kind* of slip that would occur, but there are endless ways in which a slip with a certain meaning could be arranged. Our result appears to entitle us to say that there is a high degree of probability that the discovered meaning is a necessary factor in producing the slip. But, since this factor is not sufficient, there must be some other factor or factors also necessary. It might be held that by scrutinising sufficiently carefully the details of the meaning we should find in it the determinants of every detail of the slip. Even granting this, however, we could conclude only that to any particular aspect of the slip there corresponded an aspect of the meaning as a *necessary* feature; again we should have no justification for

§ 8. The position so far reached serves to make us consider further the older thesis concerning errors. That thesis was reduced above to the feeling of distraction: if we are tired or unwell, or excited, or thinking of other things, we are in all cases giving our attention elsewhere than to the matter in hand. Therefore the situation consists of interests, which is much the same as a conflict of intentions, as Freud requires. Over much credit cannot, however, be given to the older view for it treated this conflict as a conscious one, *i.e.* it failed to recognise that the conflict was not introspectable at the moment when the slip occurred, that the conflict had a meaning, and therefore, most important of all, it did not realise that the meaning was a cause: it made the feeling of distraction a negative condition in which slips could occur (caused by what, we may ask, — “lack of attention”?) instead of making this feeling the active cause.

§ 9. But we still do not know that *all* slips have meaning that cause them. On this occasion, however, we may argue more cogently by analogy that this is true, both of examples that have not been examined and of those for which the examination was not successfully concluded. The reason why we may admit that analogy has more force here, though we refused to do so before, is that it extends from an examined case that was not immediately introspectable (like the “Pond” example) to *others of the same kind*, whereas in arguing by analogy, as Freud did, we should be arguing from examples where introspection immediately gave the desired result to examples where introspection failed, *i.e.* arguing from an immediately introspectable case to one that cannot without skill and the technique employing associated ideas be regarded as introspectable. Is the analogy wholly satisfactory even here? Final consideration of this will be postponed, but attention may fruitfully be paid to certain points.

The analogy may, to a certain extent, be compared with analogy in physics, such as that, because all examined instances of gold are malleable, therefore all instances, examined and unexamined, are malleable.¹ In other words Freud’s

(1) A philosophical issue might be raised here: how do I justify the belief in other people and the belief that they have experiences resembling mine? For purposes of the present discussion this may be shelved, for we are dealing with the methodology of a certain domain of science and making the assumptions that a scientist makes.

something at an object in water with intent to hurt (or had thrown an object into water with this intention), that Frink felt a pig because of his cruelty, and also that he identified himself with the injured object. All this could be seen by the analyst before the experience was remembered. Once that is achieved, it is interesting to find that it was not a pig that was injured, but "PIG" reversed, *i.e.* "GIP", which was the name of the dog.

Now we cannot draw on interpretations of this kind to justify the law of mistakes; but even without the interpretations — and Frink himself did not make use of them — recollection of the painful experience occurred, and even without them we can see something of the meaning of the experience and that this meaning was a factor in blotting out the name "Pond"; Frink could verify this by introspection.

Here, then, is direct confirmation *that SOME mistakes, the meaning of which is unknown to or not admitted by those that commit them, have a meaning, and that the meaning is a factor involved in causing the slip.*

On the further factual analysis of errors, Freud notes not only (what is obvious) that there is an intention interfered with but also that there is an *intention interfering*, so that *an error is a compromise-formation*.¹ In this there is nothing hypothetical, for it is no more than a (good) way of expressing the results previously obtained and verified or verifiable in terms of introspection.

§ 7. Are we justified in treating together slips of all forms? Should we not develop the law in terms of, say, slips of the pen, and then *seriatim* in terms of others? Any psychologist concerned with error would agree that the necessary examples would be supplied from any one sphere alone, so that the various forms of slip could be treated separately; but this would be needlessly rigorous, for there is nothing in the *specific medium* of any slip that has been found to be causally relevant, *i.e.* the different media form part of the "negative analogy" — the respects in which the phenomena under investigation are unlike — which is irrelevant to the conclusion. The examples cited here have been chosen simply on grounds of convenience and brevity of exposition.

(1) Freud, *I. L. on P-A*, p. 52.

(i) "Pond" reminded him of a Dr. Pond, pitcher in a baseball team. It also reminded him of an Indian Pond where he fished as a child, and where he had thrown a large stone into the water to serve as an anchor for his toy boat. It also reminded him of a man called Fischer, another baseball pitcher.

(ii) Frink's associated ideas now switched to Pond's extract, which contained a product he used to rub on his arms when he himself was a baseball pitcher. From this he thought of a fat boy in his team, who, he remembered with amusement, had fallen into a muddy puddle head first, so that he came out resembling a pig. From this he thought of someone nicknamed "Piggy", and then he remembered that his own nickname was "Pig".

(iii) Starting from "Pond" again, he had another chain of associated ideas: *ponder, think*, "sicklied o'er with the pale cast of thought", *Hamlet*, a certain *village* and a *farmer* there, one of whose neighbours had maliciously killed *two pigs* and *thrown* them into his *well*.

Then suddenly Frink remembered a forgotten experience that had given him great sorrow when he was six years of age. He used to play with his pet dog, called Gip, throwing stones for it to catch when it was swimming in the pond; on one occasion, to tease the dog he took a large stone and threw it, deliberately aiming badly, but unluckily the stone struck the dog on the nose and stunned it, so that the dog sank and was drowned.

This is a beautiful example and it has the merit of being extraordinarily *brief*; it contains conceptions capable of considerable study. Had Frink not remembered his boyhood experience and had a psycho-analyst been listening to the associations, recollection would have been aided by interpretations. The associations of (i) contain the constant theme of throwing. Frink was the pitcher, which is confirmed from (ii). In (ii) there is a misfortune to another person, with whom however Frink himself is identified because of the nicknames; and this misfortune was funny. The ideas of (iii) again bring out pitching and show that it is connected with water (the well); what is pitched is a pair of pigs, *i.e.* both his fat young friend and himself; this is recognised as cruel. The psycho-analyst would conclude that Frink had thrown

repudiated.¹ Scientifically speaking, however, this is not sufficient.

§ 6. It is easy to adopt the attitude that, because of one's knowledge of the other kinds of slip, it would be impossible to deny the same conclusion here; but that would amount to no more than a restatement of the point at issue. It would also be easy to say that full justification for the hypothesis requires the conclusions derived from the psycho-analysis of neurosis. This may be true; but then it would not be methodologically sound to use - as is often desired - the law of slips as a *proof* (or part proof) of the general psycho-analytical theory; if the law of slips is to support that of psycho-analysis, it must be logically independent of the general theory or capable of being established on its own. It would further be easy to fall back on the humour that slips evoke, and claim that since comedians deliberately base jokes upon slips there is always a meaning involved; but again this would be to invoke the support of the theory of wit, when it would be methodologically preferable to endow the present law with an independent basis. It would be easiest of all to fall back upon the artificial induction of slips by hypnosis, but this again would render the treatment of errors dependent upon a widely different field of study. It is desirable, therefore, to enquire whether the independence of the law can be substantiated.

Freud gives innumerable examples of errors he himself made, the meanings of which he did not at once recognise; but by searching for them in a special way, *i.e.* by an investigation of associated ideas, he found them. This constitutes evidence that in *some* instances one can find the meaning of a slip, even where previously one did not recognise that a meaning existed.

Here is an example, drawn from another source.²

Frink was asked by a friend for the name of a shop that sold a certain article and he could not remember the name, thought it was one he knew well; on passing the shop he saw that its name was "Pond", and he decided to investigate ideas associated with this.

(1) Freud, *J.L. on P.A.*, pp. 50-1.

(2) See Roland Dalbiez, *Psychoanalytical Method and the Doctrine of Freud*, Vol. 1, London, 1941, pp. 21-3.

when we make a slip the meaning of which we recognise though we are unwilling to admit it to other people. There would then be no methodological difficulty. But he might not himself feel there was such a meaning, and this possibility leads to the next type of mistake.

§ 5. There are some mistakes for which there is neither direct nor circumstantial evidence of meaning and for which the perpetrator does not feel that any such meaning is present; no confirmation can be obtained by questioning him. Thus there was the lady who said, "My husband asked his doctor what sort of diet ought to be provided for him. But the doctor said he needed no special diet, he could eat and drink whatever *I* choose".¹ It is true that here there is circumstantial evidence of the lady's determined character; but now we are not allowing this to count as evidence. An example that is free of circumstantial support concerns a lady who now spoke warmly of a certain gentleman for whom she had previously expressed indifference and even contempt; on being asked about her change of attitude, she said, "I really never had anything against him; he was always nice to me, but I never gave him the chance to *cuptivate* my acquaintance" — she meant of course to say "cultivate".² The meaning consists of both *cultivate* and *captive*; though it foretold the coming betrothal she would probably not have admitted the meaning to herself at that time. Doubtless also, the masterful lady would not have admitted the meaning of her slip either.

By analogy with the previous examples, in which the meaning is found by introspection by the perpetrators of the errors, the *scientific* investigator will *in fact* inevitably assume the existence of meaning in these new examples; *but he will regard this as a hypothesis requiring confirmation*. This is the normal and correct scientific attitude.

What possible evidence can be adduced to support this hypothesis? Freud himself says merely that the hypothesis has strength simply because of its analogy with the previous examples; and he makes his point the more cogently by distinguishing three types, (i) those where the meaning involved was present to consciousness before the slip was made, (ii) those where it is not anticipated, and (iii) as here where it is

(1) *Id.*, pp. 27 — 8

(2) Freud, *P. of E.L.*, p. 60

the speaker and his host not to understand each other.¹

In all these there is a meaning that fits the total situation.

What, then, is the evidence for saying that such slips have a meaning? The existence of meaning is clear to most of us, but would this be admitted by the perpetrators? In all but the first example this may be assumed. The evidence is therefore that of introspection and it is similar to a person's evidence from introspection of the meaning of any assertion he may make.

This shows no more, however, than that some slips have a meaning; as yet we do not know whether this fact is connected with the incidence of mistakes.

On this point we reflect that the professor wished to impress his audience with his talents and conclude that his wish was a factor in causing the slip. In that event, the meaning is at once identified as a causal factor: for a meaning of the present kind is a feeling; and, if we distinguish between feelings that are immediately experienced and feelings that are wishes for an experience, it is clear that the professor's feeling was of the wish kind; hence the meaning of his slip was a wish. There is no difficulty, therefore, in regarding a meaning as a causal factor. Further, the author of a slip, when he introspects its meaning, also has introspective evidence that the meaning was causal.

We have, then, that SOME slips have a meaning, and with these the meaning is a factor in the production of the slip.

§ 4. There is another class of mistakes for which there is no direct but only circumstantial evidence of meaning. Thus at a general meeting of a club a member attacked the "*Lenders of the Committee*" — instead of the Members. Now we know about his circumstances: he is in financial difficulties and is trying to borrow money.² May we not suppose that he is attacking the members because they are reluctant to lend to him? The only way of obtaining direct confirmation of the supposition would be to ask the man; otherwise we may take it to be no more than a hypothesis, though a shrewd one. If he refuses confirmation, his situation may resemble our own

(1) Sigmund Freud, *Psychopathology of Everyday Life*, Penguin Books, Harmondsworth, 1938, p. 70.

(2) Freud, *I. L. on P-A*, p. 40.

The same remarks apply to particular explanations of particular classes of mistakes. Thus slips of the tongue, and perhaps those of reading and hearing, might be explained by a tendency to reverse words or letters or carry on certain sounds, as in the following examples. A nervous hotel-boy knocked on the door of a bishop and on being asked "Who is it?" replied "The Lord, my boy!" A member of the House of Commons, who wished to refer to a member from Hull, called him the "honourable member for Central *Hell*".¹ But few slips of the tongue are of this kind and the explanation offered cannot be extended to other kinds of error.

§ 3. Freud in consequence felt impelled to put a more specific question to nature: Is there a purely mental factor that is involved in the causation of errors? He noticed that certain slips were full of meaning, which may be interpreted by saying that what has happened in error has a meaning that is appropriate to the total situation. Thus, in a newspaper a certain famous general whose weaknesses were well known was referred to as "this battle-scared veteran"; when making an apology next day the paper said that of course the intended words were "this bottle-scarred veteran".² Again, on one occasion the President of the Austrian Parliament when opening the session said, "Gentlemen, I declare a quorum present and herewith declare the session *closed*"; it is not difficult to see that he was not looking forward to the new session.³ There is an excellent example about a professor of anatomy who, after lecturing to his students about the nostril, said that the number of people that could understand it properly could be counted "on one finger" — he immediately corrected this to the fingers of one hand — ; clearly he was the only person to understand that particular subject.⁴ A beautiful example concerns a guest at a dance given by a man who, though rich, provided a very poor supper; conversation turned to one of the candidates at a forthcoming election, when the guest remarked to his host, "You may say what you please about Teddy, but there is one thing — he can always be relied upon; he always gives you a *square meal*", thus making an unfortunate substitution for "*square deal*"; there was a roar of laughter from the other guests, which made it impossible for

(1) *Id.*, p. 25.

(2) *Id.*, p. 42.

(3) *Id.*, pp., 26, 27.

(4) *Id.*, p. 32.

To be precise, let us ask whether these factors could have been regarded as necessary or sufficient for causing errors. No one would be likely to claim they were sufficient, because mistakes do not always occur in these circumstances. We might suppose they were alternatives of which the presence of one was indispensable, *i.e.* unless one of them was present no mistake could occur. This would require us to regard apparently different factors as equivalent, or else to suppose that there is an element common to the three alternative factors; and each factor or this element might be described as a feeling of distraction. The old view may then be summed up by saying that a feeling of distraction is a necessary though not a sufficient factor in the causation of errors.

Freud pointed out that error can occur when none of the three factors is operative: they can occur when we are feeling normal, unexcited, and when we are attending to the matter in hand; and, further, with an activity such as playing the piano, we are *more likely* to make mistakes if we are over-conscious of every note we are wishing to strike and *less likely* to make them if we play automatically.¹ This objection shows conclusively that these factors do not provide an adequate answer to the question, and more precisely that the feeling of distraction is not only insufficient but is also unnecessary to the causation of mistakes.

Freud agreed, however, that the three factors could *facilitate* the occurrence of errors and took the view that they were conditions in which errors could more easily happen than when we are feeling normal. But, he pointed out, they do not explain the choice of a slip from the infinite variety that could occur, and that, though they provide a channel for mistakes, they in no way explain what causes the channel to be utilised² — it is easier to bathe when by the seaside than when in the middle of a continent, but, even when by the sea, why bathe, unless there is a factor other than the presence of the sea to induce the action? In short, these factors (sometimes) provide an occasion, but do not show why the occasion should be made use of, or what form the mistake will take.

(1) *Id.*, pp. 22-3.

(2) *Id.*, pp. 24-5, 36.