



PARADIGMS & FAIRY TALES

JULIENNE
FORD

AN INTRODUCTION TO THE SCIENCE OF MEANINGS • 2

Paradigms and Fairy Tales

An Introduction to the Science of Meanings

Volume 2

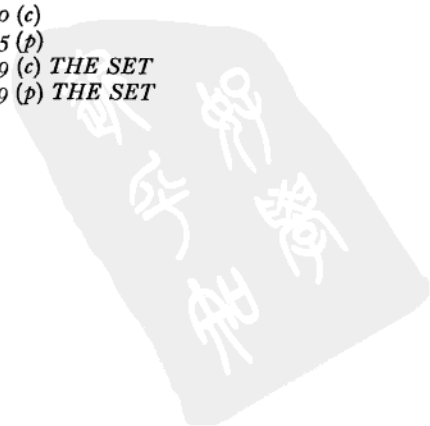
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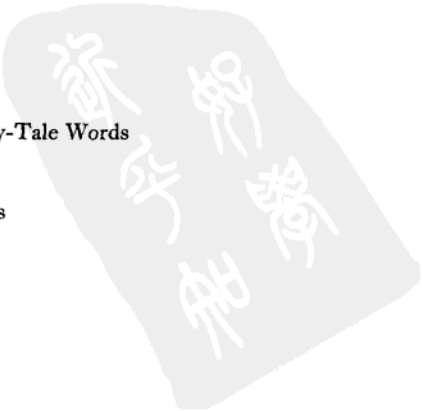
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The Light is Above

Alice was not a bit hurt, and she jumped up on to her feet in a moment: she looked up, but it was all dark overhead: before her was another long passage, and the White Rabbit was still in sight, hurrying down it. Away went Alice like the wind, and she was just in time to hear it say, as it turned a corner, 'Oh my ears and whiskers, how late it's getting!' She was close behind it when she turned the corner, but the Rabbit was no longer to be seen: she found herself in a long, low hall, which was lit up by a row of lamps hanging from the roof.

There were doors all round the hall, but they were all locked; and when Alice had been all the way down one side and up the other, trying every door, she walked sadly down the middle, wondering how she was ever to get out again.

Like Alice, we have been here more than once before. The spiralling MOUNTAIN corridors have brought us again and again to what seems like the same cloister in the midst of an unbroken series of hermeneutic circles. Each time we have felt trapped within a ring of meanings from which there was no obvious escape – and each time we have paused to wonder how we were *ever to get out again*.

How can the sociologist successfully extricate himself? How can he return to the real worlds of everyday appearances without taking off his GOLD-STAR BADGE?

The RABBITS have taught us many things about science and we have learned from them that good FAIRY TALES can be made to come true, if the proper rituals are correctly observed. And, like all serious magicians, the GOLD-STAR RABBITS have warned us against the dangers of performing the rituals in an inappropriate frame of mind. A genuinely *falsificationist attitude* towards theoretical preconceptions, PLUS a healthy respect for the ever-punctual wisdom of common sense are, as we now know, essential prerequisites for the successful establishment of those truths, which may be universally regarded as worth-knowing-about.

But now suppose that *you* are a sociologist. By virtue of that supposition you cast yourself as an acceptor of the basic metatheoretical perspective which is available to any RABBIT who is bold enough to clamber up onto the shoulders of giants like Marx, Durkheim, Simmel, and Weber. Now you want to find some simple rules for sociological research. What you want is a clear route from theoretical to hypothetical, to operational, and then to factual judgments.

But where do you begin? The White Rabbit is no longer to be seen. And where is Alice?

Suddenly she came upon a little three-legged table, all made of solid glass: there was nothing on it but a tiny golden key. . . .

The key you require is, of course, an *IMPLICIT THEORY*. The second-order happenings which crowd upon your sociological consciousness when you adopt the role of a real stranger in a real social world are meaningless phantoms until *you* bestow meaning upon them by sociological theorizing. Not until you have some second-order theoretical conceptions, albeit vague ones, do you have a starting-point for research. And, though many sociological RABBITS have tried to reduce the activity of second-order theorizing to a set of routinized procedures, none denies the importance of pure *imagination* in the initial conception of theory.

Certainly there are some funny bunnies who, like Glaser and Strauss,¹ will try to seduce you into a Tiggiwinkle world of dirty smalls. These furry fellows believe unflinchingly in liberated LAUNDRY; so much so that they keep flaunting their theory-construction procedures before you. Indeed, they even attempt to lure you into that steamy backroom of the mind where they spend many sweaty hours chanting the four principal modes of John Stuart Mill's inductive methodology:²

1. THE METHOD OF AGREEMENT

If two or more instances of the phenomenon under investigation have *only one* circumstance in common, the circumstance in which alone all instances agree is the cause of the given phenomenon.

2. THE METHOD OF DIFFERENCE

If an instance in which the phenomenon under investigation occurs, and an instance in which it does not occur, have every circumstance in common save one, that one occurring in the former, the circumstances in which alone the two instances differ is the effect, or the cause, or an indispensable part of the cause, of the phenomenon.

3. THE METHOD OF CONCOMITANT VARIATIONS

Whatever phenomenon varies in any manner, whenever another phenomenon varies in some particular manner, is either a cause or an

effect of that phenomenon, or is connected with it through some fact of causation.

4. THE METHOD OF RESIDUES

Subduct from any phenomenon such part as is known by previous inductions to be the effect of certain antecedents, and the residue of the phenomenon is the effect of the remaining antecedents.

These strategies for theory construction are still to be found in most textbooks on sociological methodology. But you have my personal guarantee that, if you try to emulate them you will get nothing but hot and sticky. For not only do these procedures rest upon a number of unacceptably positivistic assumptions – such as the implicit belief that all {relevant?} variables are available to the theorist in the form of observables – but, far from stimulating the imagination, they tend to stifle it. And it is not until the intervention of imagination that theory-work can truly begin.

So do not be bamboozled into the steam-room of routinized induction! No one can show you where to find your theory. Though the stock of knowledge-kept-as-sociology, may be regarded as a three-legged glass table it is still up to you to pick up your own golden key.

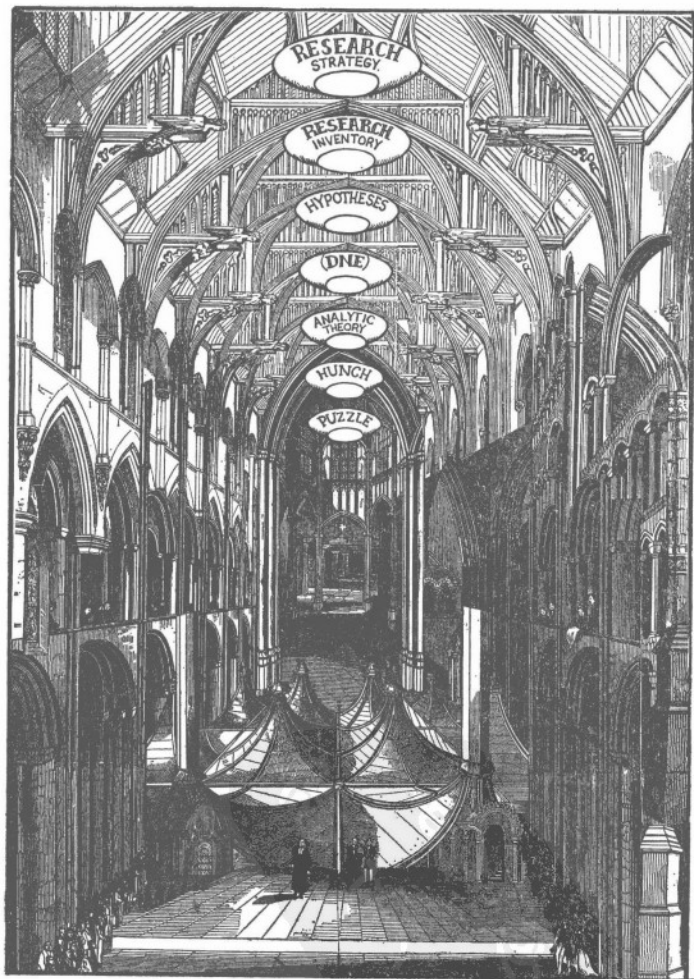
And, once you have the key, it remains for you to fit it in the right lock! For, like keys, theories are created for a specific purpose. Theories are no more use without puzzles than are keys without locks: though both may be works of great craftsmanship they have only formal value. It is *curiosity* which is the starting-point for theorizing, and theorizing which, as we have seen, is the first stage of scientific investigation.

Curiosity and *imagination*! These are the secret tokens which decide the final outcomes of research rituals, for, without these two, the elaborate procedures and techniques of research will yield only boredom and sterile statistics.

Let me now assume that you have both lock and key. From a multitude of appearances you have abstracted a puzzle and you have invented (or at least borrowed) a causal story which has, for the moment, a certain plausibility, at least as a second-order construction of meanings.

Now look *above*! You will see that you are standing underneath an illuminated sign, and a little further on down the low warren is another such sign. The signs seem to extend in sequence down the length of this dark hall, a hall remarkably like that in which you last saw the comforting figure of the White Rabbit. But that GOLD-STARRED gentleman is certainly not here now, and there are not even any of his ordinary run-of-the-mill colleagues to guide you. No. Unless you know another way out, your only guide from now on is the book in your hand. (See the illustration on page 222.)

If you look at that illustration you will notice that it bears a striking



Lights Above

similarity to the pattern of the illuminated signs on the roof above. The first part of the plan is probably clear to you already.

It seems that you have already made one move down the dark warren which leads from this FAIRY-TALE place to the lands of reality outside. You have moved from your starting position under the sign *PUZZLE* to a part illuminated by the *IMPLICIT THEORY*. The next stage is to turn your vague FAIRY TALE into a more formal causal model; because only when your second-order construction of meanings can be stated as a formal pattern of causes and effects – of INDEPENDENT, INTERVENING and DEPENDENT variables – will it be genuinely open to the critical scrutiny of the community of RABBITS whom you have chosen to adopt as peers.

In the next chapter you will find some hints on theory formalization which may be of guidance to you. You will find that, if you are to move away from this dimly lit and muddy part of the passage and on to the firm, dry part, illuminated by the much brighter lamp which lights the sign *ANALYTICAL THEORY*, then you will need to take four steps.



A Short Cut from A to B

If you accepted the GOLD-STAR version of the methodology of science, you will agree that, from the point of view of preparation for the rituals of scientific research, the ideal way to present a theory is as a deductive nomological explanation (D.N.E.). That is to say that, *ceteris paribus*, it is desirable to formalize one's theory as a 'logical' pattern of intrinsically connected judgments about causal relationships between variables, where at least some of those variables are specifiable as actual or potential appearances. But – as I once learned to my cost in a school chemistry laboratory – *ceteris* rarely are *paribus*.

There are many reasons why it may be impractical to formalize an *EXPLANATORY THEORY* before proceeding to testing rituals. One very good reason is that that sort of formal theory-work takes a long time, and the normal run-of-the-mill RABBIT is generally impatient to state his theoretical fabrications ('Oh my ears and whiskers, how late it's getting!'). And, as we have seen, the retroductive process of theorizing often involves the 'premature' testing of hypotheses – a theorist may well wish to test part of his theory before risking placing the whole delicate edifice on a few caryatidic hypotheses.

It is for these reasons that so many theorists choose to draw up their ideas in the form of causal models or *ANALYTICAL THEORIES* rather than going the whole GOLD-STAR hog. Of course, an *ANALYTICAL THEORY* is less precise as a structure of ideas than is an *EXPLANATORY THEORY* and the former cannot be so readily checked for errors of reasoning as can the latter. Yet even a two-dimensional model is to be preferred to a rambling verbal description. For, in a well-presented *ANALYTICAL THEORY*, much of the causal framework which the theorist has constructed is clearly open to scrutiny by other scientists, while an *IMPLICIT THEORY* remains an essentially covert set of judgments.

Do you remember when our erstwhile rabbit guide suggested a short cut through the MOUNTAIN?¹ Well, I think that we would do well to take

that short cut now. Let's not dally in the warrens of esoteric formalism but proceed by the quickest and most practical route.

The quickest and most practical way that I have found² for drawing up a causal model is as follows (and you will have to read to pages 256-8 to understand the numbering!):

Devising an analytical theory

II, 1. Take a large piece of paper and divide it into three sections (see Figure 12).

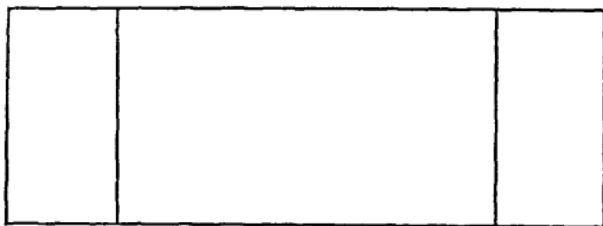


FIGURE 12

II, 2. Now label the sections of your page from left to right, thus:

INDEPENDENT VARIABLES		INTERVENING VARIABLES		DEPENDENT VARIABLE
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The **DEPENDENT VARIABLE** is the event or phenomenon – the happening – whose variance you wish to explain, it is the variable which you would have named as the subject of the *explanandum* if you had decided to draw your theory up as a deductive nomological explanation. The other side of your page you have a space for the **INDEPENDENT VARIABLE(S)**, that is for that (those) happening(s) which you have decided to treat as (a) given factor(s) whose variance is to be taken-for-granted. Another way of describing **INDEPENDENT** and **DEPENDENT VARIABLES** is, of course, in terms of 'causes' and 'effects'. Anything that you place in the first column on the left is to be regarded by you as a 'cause', while whatever appears in the right-hand column is to be taken as an 'effect'.

In the centre column you list all those variables which you consider to 'intervene' between the 'causes' and the 'effects'. These are those fictions which you have invented (or borrowed from other theorists) as part of your explanation of the relationship between the **INDEPENDENT** and **DEPENDENT** variables.

For example, suppose that you wish to compose a causal story to explain some puzzling aspect of the variance in *educational qualifications* in England and Wales. You posit *social class* as an independent causal factor, and, in order to link this with your dependent variable, *educational qualifications*, you introduce a number of other notions which can be placed in the middle box. These INTERVENING VARIABLES are concepts which, like the dependent and independent variables, are believed to have equivalents in appearances which, if not directly observable, are at least indirectly so. Thus, for example, notions like *socialization practices*, *intelligence*, and, say, *teachers' attitudes* may appear in your middle box. Each of these is a theoretical fiction which can, none the less, be linked arbitrarily with the world of appearances via certain measuring operations: intelligence, for example, may eventually come to be replaced in your thoughts by *IQ scores*, *teachers' attitudes* by *the-answers-certain-teachers-give-to-certain-of-your-questions*, and so on.

Your page should be beginning to look like a rather scruffy shopping list, thus:

INDEPENDENT VARIABLE	INTERVENING VARIABLES	DEPENDENT VARIABLE
social class	socialization practices intelligence teachers' attitudes	educational qualifications

II, 3. Once you have sorted the variables-which-have-already-occurred-to-you into these three boxes you can begin to arrange them in some sort of pattern. You will find that, as you do this, you are both elaborating and clarifying your ideas about the causal sequences involved in your original implicit theory.

In my view it is easiest to use the simple arrangement of boxes and arrows which I suggested in chapter 7. For instance, the example suggested above might be rearranged as in Figure 13.

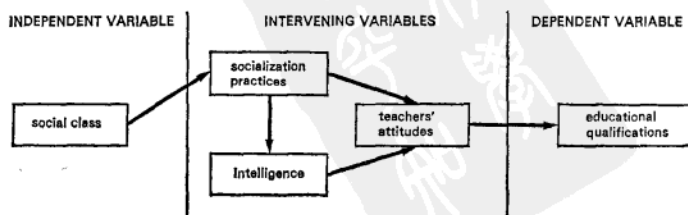


FIGURE 13

Looking at this rearrangement (Fig. 13) it becomes apparent immediately that there is still a great deal of work to do before *this* theory looks adequate as an explanation of the relationship between *social class* and *educational qualifications*. Certainly there are a host of other INTERVENING VARIABLES begging for inclusion. What about the *parents' attitudes towards education*? What about the child's own *self-conception of ability*? How are these two causally related? And how do *school selection routines* enter into the picture? What part do *informal friendships at school* play in the story? And so on, and so on.

EXERCISE

Play around with this FAIRY TALE until you are satisfied that you have a plausible ANALYTICAL THEORY.

Eventually you will find an arrangement that seems to make reasonable sense as a construction of sociological ideas. Remember, though, that, however impressive your diagram may look, it *is* nothing more than a FAIRY TALE. Even the classification of variables into boxes is entirely dependent upon your theoretical whim. Thus the 'same' variable may appear as a DEPENDENT VARIABLE in one theory, an INDEPENDENT one in another, and an INTERVENING one in yet another. For example, *political values* may be taken as happenings-to-be-explained in a theory which postulates *social class*, *education* and a number of other variables in a causal sequence. However, a different theorist might take *political values* as the INDEPENDENT VARIABLE, say in a theory about *propensity to support industrial militancy*. And still another theorist might place *political values* between *social class* and *propensity to support industrial militancy*, as an INTERVENING VARIABLE.

So, from the standpoint of other theories, your model may not only be rearranged, but certain other variables might be included or even used to replace some of those which *you* had chosen. For example, a critic of your theory of the relationship between *social class* and *educational qualifications* might suggest an alternative. He might suggest that the relationship is due to the differential distribution of *educational facilities in the home*. Behind this suggestion might be an implicit theory based upon the idea that educational qualifications reflect the *standard of schoolwork* which a child has achieved throughout his school life. A quiet room to do homework, plenty of books, and the ability of parents to help with homework and suggest further lines of study, might be decisive factors.

Major INTERVENING VARIABLES in this theory are therefore

VARIABLES, X, provides a *short circuit*; it posits a more simple causal connection between the INDEPENDENT VARIABLE, C, and the last INTERVENING VARIABLE, D. On the other hand, consideration of rival FAIRY TALES has led to an *elaboration* of the tale at another point: the link between A and B has been spelt out more fully by the intervention of Y, Z and W.

Now, perhaps it has occurred to you that some of these EXTRA-NEOUS VARIABLES won't fit on your page! This is because they are variables which, from another point of view, might be posited as causes of your original INDEPENDENT VARIABLE. In the examples we have considered so far all the EXTRANEIOUS VARIABLES suggested by rival theories could be included in the middle boxes of the original theories as INTERVENING VARIABLES. But suppose that a critic suggests (or you anticipate one suggesting) that there may be some factor(s) ANTECEDENT to your *whole story*. Suppose he puts forward a theory suggesting variable(s) which may be taken as causally independent of your own INDEPENDENT VARIABLE(S), the latter thus taking the status of mere INTERVENING or DEPENDENT VARIABLE(S) with respect to that new factor.

In order to assess the ways in which such ANTECEDENT VARIABLES could affect your own analytical theory you would need a larger piece of paper! Your original sketch could then be incorporated into a 'bigger' picture by simply including the first within the framework of the second. In this manner you would be *transcending* one analytical theory with a more general or 'roomier' one.

For example, suppose that you have a model which looks like Figure 16.

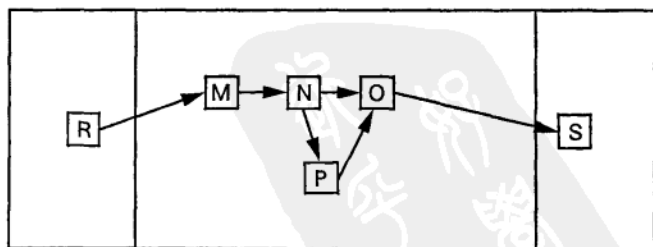


FIGURE 16

Now suppose that someone suggests that your INDEPENDENT VARIABLE, R, is itself an effect of an ANTECEDENT, Q. You can simply sketch the two theories together in a 'larger' diagram, as in Figure 17.

The left-hand section of your original diagram has now been demoted to the status of a mere part of the middle section in the new theory. But notice also that the causal sequences posited by your original FAIRY TALE remain unchanged within the 'bigger' story. In these circumstances then, you would be quite justified in retorting to your critic, 'so what?'. For his criticism is irrelevant to your task of devising an adequate set of tests for your theory: though it generates an *additional* proposition, regarding the effects of Q on R, it does not lead to any judgments which *conflict* with those of your original theory. There would, then, be no reason at all for you to consider changing your level of analysis as a result of this criticism.

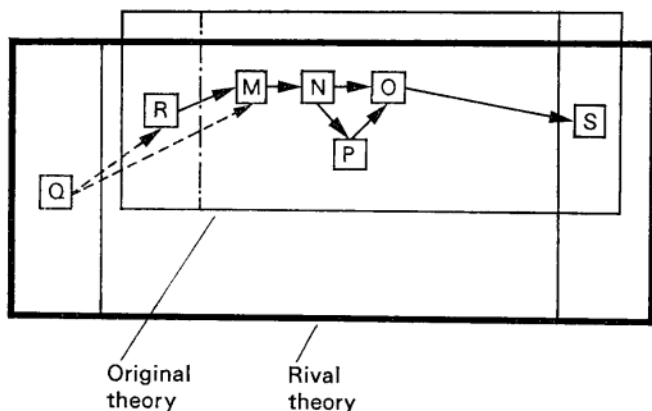


FIGURE 17

But now consider the case as shown in Figure 18.

Here the second FAIRY TALE does not merely *add to* but actually *contradicts* the original one in some respects. The second theory states, $Q \rightarrow R$ and $Q \rightarrow M$

That is to say that the new ANTECEDENT is treated as a factor causing variance in both the original INDEPENDENT and one of the original INTERVENING variables. This means that, from the standpoint of the second theory, the original proposition,

$R \rightarrow M$

is regarded as spurious.

Obviously there are quite a number of different ways in which conflicting stories can fit together, some of these involve transcending levels

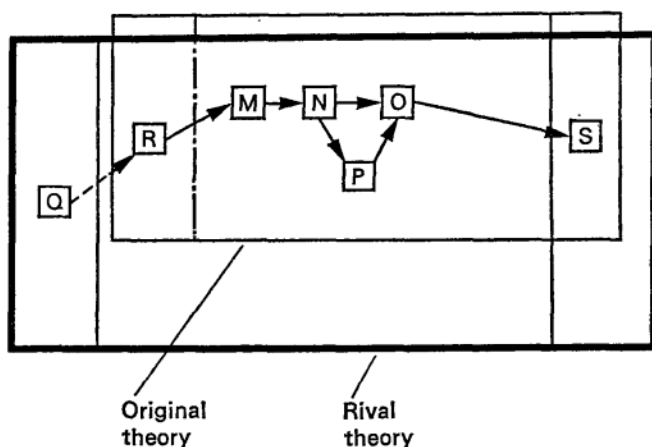


FIGURE 18

of analysis and some do not. In Figure 19 two stories are represented which, though not involving any change in the level of analysis, none the less provide quite mutually exclusive explanations of the relationship between an INDEPENDENT and a DEPENDENT variable.

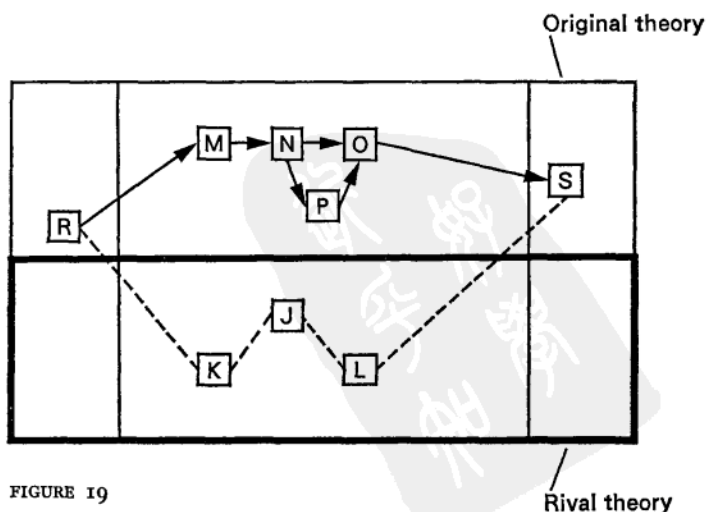


FIGURE 19