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Explanation in Experimental Phenomenology: The Nomic, Deterministic and Modal Domain

The aim of the present paper is to present several explanation models and discuss the most suitable for a nomic, deterministic and modal domain.

Discussion on scientific explanation has historically diversified along three lines: epistemic, pragmatist and ontic. The epistemic line started reflection on explanation and was promoted by the neo-positivists (Hempel & Oppenheim, 1948; Hempel, 1962, 1965) who identified explanation with a deductive or inductive, but in any case nomological process characterized by logic validity. The pragmatist line (Scriven, 1958, 1962; Bromberger, 1962; 1966; van Fraassen, 1977; 1980) instead identified the objective of explanation in an answer to a why-question guiding explanation to the objective of highlighting the pragmatic, linguistic, contextual and epistemic conditions of the communication process. The ontic line (Railton, 1981; Salmon, 1984; 1989) is based on the identification of mechanisms that oversee natural processes and has causally characterized explanation. Next to these lines the teleological-functional line, which makes reference to a functionally oriented system aiming at a goal, was developed.

In Psychology of perception, the nomic, deterministic and modal domain is typical of those different theories, like Gestalt psychology (Wertheimer, 1923; Köhler, 1947; Koffka, 1935) and only in some ways (McLeod, 1974), Ecological psychology (Gibson, 1979). The disciplinary reference for this domain is experimental phenomenology (Katz, 1935; Michotte, 1954; Metzger, 1935; Bozzi; 1989; Sinico, 2003), which takes observables as *explanandum*, that is to say the data under observation, definable also in terms of content of the *direct* and *immediate* experience. Within this perspective, observables are an epistemologically independent knowledge field, but they can also be assumed to be the goal of the perceptual system and therefore become propaedeutic knowledge to the study of its functioning. This domain is nomic because its objective is knowledge based on the formulation of laws. It is also deterministic because, albeit within a framework of mechanistically non-causal relationships, it denotes a class of phenomena totally determined by field dynamics, which, as a consequence, excludes any

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probabilistic reference. Lastly, this domain is modal by virtue of the condition of necessity inscribed in relationships between perceptual variables.

The next paragraphs will examine the most significant explanation approaches for experimental phenomenology.

1. Deductive-Nomological Mode

The deductive-nomological model was promoted by Hempel & Oppenheim (1948) and Hempel (1962, 1965). According to this model, explanation can be ascribed to a valid deductive argument and, consequently, it would exclude inductive arguments which are characterized by probabilistic terms. Such exclusion, which is in line with the nature of the object in experimental phenomenology, will be discussed later. First, it is necessary to specify what is implied by accepting the presupposition that explanation is an argument.

In experimental phenomenology, the data from immediate observation do not have a cognitive statute due to being reduced to a sentential plane, also because they are completely defined in the states of things under observation. However, it would be tendentious to maintain that in this research domain an anti-sentential proposal could be put forward. Indeed, the laws on observables can also be expressed in sentential terms: however, on the sentential plane these laws cannot be granted an ontological status. The laws of experimental phenomenology, even when they are not under observation, can in any case be considered true and reliable in reason of their controllability. The same is true for terms of explanation, not necessarily under observation, which have validity on the formal plane. In that sense, within Experimental phenomenology, the supremacy of an epistemic line can be affirmed. So, explanation can be qualified as an argument, regardless of the amount of criticism on the epistemic line in the literature, which in any case concerns statistical explanations (Jeffrey, 1969) more than the deductive-nomological model (Von Wright, 1971).

With regard to the explanans, some statements describe 'particular facts', i.e., the single states of things (C_1, C_2, ..., C_k), which, say, making reference to perceptual proximity grouping, would be some dots placed at different perceptual inter-distances, and some statements that describe uniformities, expressible as laws (L_1, L_2, ..., L_r), in the case in point, without confusing perceptual laws with *Gestalten*, Wertheimer's law of proximity.

Figure 1.a

Figure 1.b

Fig. 1. In Figure 1.a no particulare organization is seen. In Figure 1.b is seen as a couple of dots.

So, the deductive-nomological explanation is an argument by which, based on the *explanans* - more specifically: in keeping with particular circumstances and general laws - the *explanandum* is deductively inferred.

In their work, Hempel and Oppenheim have distinguished law-like statements (see also Goodman, 1947) from law statements. The former can be false, whereas the latter are always true. Thus, explanations can be potential, when, for instance, it is still a hypothesis. So, the *explanans* can be not true but the *explanandum* must always be true.

Statements that express general laws may have different logical forms, for instance they may have the form of universal conditional. However, the logical form is not enough to establish whether the statement expresses a law (Goodman, 1955). Let us consider an example of law expressed in universal conditional form, that is to say (x) (Fx -> Gx): "All the books in my library have fewer than 2271 pages". This would not be a law, but only an accidental generalization. In these cases, verification is supplied by the fact that a similar statement is unable to support counterfactuals. Such a statement, in fact, cannot support: "If the unabridged version of Belli's Sonnets were in my library it would have fewer than 2271 pages". Differently, a statement like "All proximal dots group together" corresponds to a law, so much so that if in any given configuration where dots are perceptually equidistant the distance between dots were modified, the dots that were perceptually nearer one another would necessarily appear as grouped. Secondly, this nomic statement coupled with particular conditions like "Dots b and c lie at a distance equal to 1/3 of the distance between dots c and d and between dots a and b" is a valid explanation as to why the dots are indeed grouped.

A third important characteristic of laws is their modal import. Laws express what is necessary (for the relevance of requiredness in experimental phenomenology, see Köhler, 1938): if b and c are the nearest two dots they will necessarily form a group. On the contrary, if a new book is added to my library it will not necessarily have to have fewer than 2271 pages.

Even if, according to Salmon (1989), the predicates 'to be a law of nature', 'have a modal import' and 'support counterfactuals' would have the same extension: «statements either possess all three or lacks all three» (p. 15). However, the determinants to distinguish a law from mere generalization were identified by Hempel and Oppenheim through the criterion by which a law, in addition to having a generalized form, must not apply to a finite number of cases or individual examples. A law, then, must have a generalized form, that is to say that it cannot apply only to a class of events a, b, c, d, e that have a given property P. Furthermore, to ensure that they do not apply to particulars, they must contain only qualitative predicates and not terms like 'solar', 'spatial', 'visual', etc. which, albeit implicitly, would imply particulars.

Such a restriction is problematic because it would not consider as laws also those that have a doubtless cognitive import like, for example, Galileo's law of falling bodies, which refers to a reference system, which is the Earth. For this reason, Hempel and Oppenheim distinguished between fundamental and derived laws (see Reichenbach, 1947). The latter would be universal statements derived from the former through deduction.

The explication of explanation can now be summed up in the two following steps: first <T, C> is the potential *explanans* of E only if T is a general sentence, C is a singular sentence (which contains no quantifiers and no variables, can contain binary connectives) and E is derivable from T and C jointly, but not from C alone. However, this definition of potential *explanans* is a necessary but not sufficient condition. Indeed, if E is a true sentence, then C must be true as it is a material implication by which the consequent is a true sentence. This means that, through this definition alone, a potential explanation of any particular fact could be supplied by means of any true lawlike sentence. Consequently, a restriction was needed to avoid C being established as true on the basis of E. The authors then imposed that T must be compatible with at least one set of basic sentences from which C, but not E, can be derived.

They imposed a procedure that could verify the truth of C without also automatically verifying E as well. With this further restriction the explanation was then defined: <T, C> is the *explanans* of E only if <T, C> is a potential *explanans* of E, T is a theory, and C is true. At a later date, Kim (1963) added another condition: if C is expressed in the conjunctive normal form (in which each of the conjunct terms is a disjunction of statement variables or of their denial), E must not entail any of the conjunct terms that are in C.

Lastly, it must be noted that in the explication of explanation supplied by Hempel and Oppenheim the notion of theory was used and that the fundamental theory was distinguished from the derived theory similarly to what was done with laws. The distinction between laws and theories, though, was not based on the presence of hypothetical (non-observative) terms, but on the possibility for theories to contain existential quantifiers and for laws to contain only universal quantifiers. However, as Salmon (1989) suggests, many laws and many theories contain existential quantifiers: for example, 'every human has a brain' requires an existential quantifier: 'for each x there exists a y such as …'

Among the most insidious critiques to this model, those on the role of causality and those on the importance attributed to laws have to be mentioned. The issue of cause-effect asymmetries is not pertinent to this disciplinary context. Within this field, the aim is nomic and the laws are qualified as not being of the causal type in a mechanistic sense. In experimental phenomenology the variables in play are coplanar: possible dependence relationships between variables are there-

fore necessarily coplanar, without a causal constraint (Sinico, 2008). About laws, the fact remains that the scientific aim of explaining by means of a law is of paramount importance. Obviously, the degree of importance will depend on the specific object being investigated by the discipline considered.

Then, the efficacy of some of many counterexamples is, however, not enough to exclude *sic et simpliciter* the adoption of the deductive-nomological model; rather, they have the function of binding its degree of adoptability. Hempel himself explicitly confined the model to a specific typology of discipline whose aim is nomic, deterministic and modal knowledge.

The constraints imposed on the deductive-nomological model fall within the methodological criteria of experimental phenomenology rooted in the data under observation, whose cognitive aim is nomic, deterministic and modal.

Lastly, it remains to be explained to what extent it is compatible for experimental phenomenology to assume a structural correspondence between the logical-symbolic plane of statements and the empirical plane, in order to supply explanations. Such an assumption would be avoided through resorting to ostensive definitions, on the one side, and to sentential language, on the other. Within this perspective, the pragmatist line would have the advantage of inserting the sentential language into a wider flexible schema.

2. The Pragmatist Line

Around the 1980s, together with the development of formal pragmatics, the line of pragmatist explanation developed with van Fraassen's work. Based on the observation that in natural language the truth of statements depends on context, he criticised the explanation models of the past, which were always conceived in terms of an exclusive relation between a theory and a fact and neglected the essential role of context (Morris, 1955).

The pragmatist approach to explanation does not, however, exclude the syntactic and semantic ones: the latter are, if anything, complementary to the former. Taking the pragmatist approach to explanation means, first of all, making reference to the linguistic plane, with actual speakers, within concrete linguistic contexts, but always taking into account syntactic and semantic references.

According to van Fraassen's perspective (1980), first of all, an explanation is not an argument but an answer to a why-question. Obviously, not all why-questions need an explanation as an answer. To a rhetoric question like "Why did it have to rain today, just when I was going for a walk in the countryside?" an explanation would not be an adequate answer. Secondly, a question is asked only if the phenomenon to be explained has actually occurred. Thus, the most appropriate answer to the question "Why doesn't rain wet?" would, again, not be an explanation but rather a request for clarification on that phenomenon, or an observa-

tion that casts doubts on the phenomenon. Therefore, if the explanation takes the form of a why-question, not all why-questions require an explanation.

A why-question (Q) like "Why does that phenomenon occur?" can be formally expressed through a triple ordinate:

$$Q= <P_k, X, R>$$

where P_k is the theme of the question, the *explanandum*, deemed as true by whoever asks the question, k represents the context with its background knowledge, X is the so-called antithesis-class, and R is the relevance relation. Let us now clarify these terms.

The antithesis-class (X), which specifies the theme of the question, can be defined as follows:

$$X= \{P_k, P_1, P_2, ..., P_n\}$$

The antithesis-class actually represents the possible questions that the same question statement can produce. Next to P_k, then, the antithesis-class covers all questions alternative to P_k, that is to say $X\text{-}P_k$. Let us consider the same example made by van Fraassen: "Why did *Adam* eat the apple?" In this case, the antithesis-class is {Adam ate the apple, Eve ate the apple, the snake ate the apple, …}. But to the question "Why did Adam *eat* the apple?" the antithesis-class will be {Adam ate the apple, Adam threw the apple away, Adam hid the apple, …}. And to the question "Why did Adam eat the *apple*?" the antithesis-class will be {Adam ate the apple, Adam ate the pear, Adam ate the cherry, …}. It must also be said that in the usual practice of scientific discussion, context amply specifies the antithesis-class, and so the possible alternatives are implicitly given.

Salmon (1989) maintains that a why-question is necessarily based on three presuppositions:

1. P_k is true;
2. each P_j in X is false if $j \neq k$;
3. there is at least one true sentence, A, which has the relation R with the ordered pair $<P_k, X>$.

The first two sentences together form the central presupposition. Sentence A, also called 'the core of an answer' to Q, may be a direct answer to the why-question Q, in the following terms:

Pk in contrast with $(X\text{-}P_k)$ because A.

However, for this to be a direct answer to Q the following four conditions must be met:

1. A must be true;
2. P_k must be true;

3. All the members of X, except P_k, must be false;
4. A must have the relation R with $<P_k, X>$.

The relevance relation (R) concerns the possible answer given to Q, that is the why-question. In fact, a statement A may be an answer to Q, and thus a possible explanation of Q, only if it has a relation R with $\{P_k, X\}$. In other words, the explanation is obtained through the relation R between the theme of the question (P_k) and the antithesis-class.

However, whereas for Salmon the relevance would actually be a causal relation, for van Fraassen it would rather be determined by context, and it would then be identified with antithesis-classes. The latter point was the target of Kitcher and Salmon's criticism (1987), who underlined that lack of a more precise criterion in the relevance relation would lead to accepting explanations with not-at-all scientific relations.

Here, Kitcher and Salmon's example is modified and applied to Müller-Lyer's illusion. Question Q can be formulated as: "In Müller-Lyer's figure, why is segment A longer than segment B?" with P_k= in Müller-Lyer's figure segment A is longer than segment B; X_1= segment B is longer than segment A; X_2= segment A is as long as segment B; R= the observer's neurons have nuclei, axons, and dendrites.

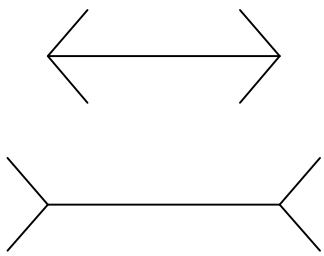

Fig. 2. The Müller-Lyer illusion. Both lines are the same physical length, but appear different.

The direct answer would be: P_k is in antithesis to the rest of X because of A, with A being the true description of the observer's brain cells - indeed made up of nuclei, axons, and dendrites - for whom segment A is longer than segment B. However, such an explanation (which could not even be falsified) is obviously not an acceptable scientific explanation.

In light of this criticism, it can be concluded that if the pragmatist approach à la van Fraassen has, over other models, the advantage of not having to establish compromising constraints with logic and ontology, nonetheless it is not a tool able to autonomously define scientific explanation, that is, without having to rely on assumed knowledge of scientific relevance. This does not prevent the pragma-

tist approach from being a useful way of meeting the requirements of explanation within experimental phenomenology when the better defined and necessary conditions for the adoption of the deductive-nomological model are not met.

3. The Ontic Line and the Teleological-Functional Model

The ontic line is not basically congruent with the presuppositions of experimental phenomenology. Indeed, an explanation that implies a causal schema does not supply an adequate model to a disciplinary ambit in which the terms of the laws are always devoid of a mechanistic (i.e., dynamic) causal link, and are therefore coplanar, symmetrical. In discussing the counterexamples to the validity of the deductive-nomological model we have already seen that the issue of cause-effect asymmetries is not pertinent to this disciplinary context. For this reason, and because of their role in cognitive science and neuroscience, it is more useful to study in depth the teleological-functional model.

This description by Hempel (1959) is recognised in the literature as a classic reference: «The heartbeat has the effect of circulating the blood, and this ensures the satisfaction of certain conditions (supply of nutriment and removal of waste) which are necessary for the proper working of the organism (p. 305)». Hempel schematises in the following terms what he calls the model for 'functional analysis'. «*Basic pattern of a functional analysis:* The object of the analysis is some "item" *i*, which is a relatively persistent trait or disposition (e.g., the beating of the heart) occurring in a system *s* (e.g., the body of a living vertebrate); and the analysis aims to show that *s* is in a state, or internal condition, c_i and in an environment representing certain external conditions c_e such that under conditions c_i and c_e (jointly to be referred to as *c*) the trait *i* has effects which satisfy some "need" or "functional requirement" of *s*, i.e., a condition *n* which is necessary for the system's remaining in adequate, or effective, or proper, working order (p. 306)».

A teleological-functional model of explanation is therefore particularly suitable to answer questions where the reference is a goal. For instance: "Why do we perceive two couples of dots in figure 1.b?" However, this kind of explanation does not confine itself to supplying a perfect description of a mechanism; rather, it identifies and makes explicit the conditions that allow the actuation of a function. In sum, it is not enough to describe the normal functioning of the binocular system; all the conditions of that function must be made explicit.

The term 'teleological', which refers to the philosophical issue of final causes, derives from the basic notion of goal (Nagel, 1961). Although the modern sciences are not interested in the issue of final causes, since conceptions characterised by isolated systems prevail, the theoretical reasons that once justified the instances of finalism are just as necessary today as they were then; however, those reasons have today been adumbrated, through reductionism, by physicalism. This

operation certainly requires an epistemological justification, which, as it is not central to the aims of the present text, is here neglected in favour of the examination of the validity of the teleological-functional model for experimental phenomenology.

The teleological-functional approach presupposes a system. Briefly, in the majority of cases a system is an orderly set of elements in which all the elements are inter-related and inter-dependent: each element can modify the whole system. A system is characterised by at least three aspects: each element can become in turn a sub-ordinate system just as any system can become an element of a super-ordinate system; it has a recursive modality; its aim is not the specification of causes, but the conditions of equilibrium. Added to this there is the fact that a system is set in a context that can perturb the system. At the same time, wholly independently of the environment, the system can also actuate a behaviour. The balance between these two activities is regulated by what the teleological-functional model recognises as explanation: a process - or its genesis - and some given conditions.

Many critiques have been moved to the teleological-functional model of explanation. Hempel himself, realising the lack of covering laws, preferred to consider this kind of model nothing but a form of analysis, excluding it from the array of explanations (Hempel, 1959). Salmon has underlined a problem in the model. While in the deductive-nomological model, simply based on the *explanans* the *explanandum* can be deductively inferred, in the teleological-functional explanation, based on the *explanandum*, as well as on some accessory conditions, but without any logical connection, the *explanans* can be inferred (Salmon, 1989). Bearing this aspect in mind, the so-called *problem of the functional equivalents*, according to which different systems can have the same function, can be understood. Consequently, the explanation leaves total uncertainty about the factors responsible for the realisation of the function and therefore the general validity of this model can be seriously questioned.

Independently of the validity in itself of the teleological-functional explanation, also this model does not seem suitable for experimental phenomenology. The latter is actually oriented towards nomic knowledge, which does not fall within the schema of the function directed to an aim typical of the teleological-functional explanation. On the contrary, in cognitive science and especially in the study of perception, the functionalistic investigation, which aims at inferring a perceptual system, has had quite a following in the last few decades, and, with it, so has the resorting to teleological-functional explanations (Fodor, 1968). Resorting to this model of explanation has even characterised a critical step of the discussion on direct vs. indirect perception. In the 1980s, some ecological psychologists (Gibson, 1979; Turvey, Shaw, Reed & Mace, 1981; Michaels & Carrello, 1981) stated the direct nature of perception in contrast to the cognitive scientists (Fodor & Pylyshyn, 1981;

Ullman, 1980; Marr, 1982) who promoted indirect perception, that is, resorting to unconscious processes in perception. This heated confrontation between ecologists and cognitive scientists has generally highlighted two different theoretical matrices and has ultimately led the debate between the opposing factions to state differences of principle, or even to slide towards the *petitio principii*. If such confrontation had taken place on the meta-methodological plane, and in particular on the plane of empirical control of theories, the discussion on the direct vs. indirect perception dichotomy could have highlighted advantages and disadvantages of the two positions. Calling into play the unconscious processes as the cognitive scientists have done, albeit with a useful theoretical strategy to account for otherwise non-explorable psychological modalities, brings with it greater uncertainty on the empirical control, since the hypothetical terms do not have univocal and certain empirical confirmation. Therefore, to the extent that it is possible to rely only on direct observational data it is advantageous to take an approach that offers a higher guarantee on the empirical control plane (Sinico, 2003).

However, the core of the cognitivistic criticism to ecological psychology concerned the limitation of research only to one plane of explanation: the plane of ecological optics, that is to say the plane of identification of invariance laws based only on the information available on light. This criticism maintains that ecological psychology does not account for the way the perceptual system processes the information available in the mediation of light and does not find any connection with the plane of physiological knowledge, crucial steps to supply an explanation of the visual system functioning. It is apparent, however, that the cognitivists could make this accusation only because they took resorting to a functional explanation model for granted. Asking for an explanation connected to the physiological plane would be legitimated within a systemic perspective, appropriate to a teleological-functional model of explanation. Otherwise, in as much as the ecological approach was directed to establish natural laws (Turvey & Shaw, 1979), a model of explanation with a nomic goal should not necessarily account for physiological knowledge (it must be specified that the ecological approach is itself based on a systemic conception which has been outlined since Gibson's second book *The Senses Considered as Perceptual System* (1966) - as Costall (1981) remarks - which, however, is built on the mutualistic relation between organism and environment). On the other hand, it is always the meta-methodological instrument which adapts to the scientific aim and never vice versa. Therefore, in as much as the scientific goal of ecological psychology was establishing invariance laws - ontologically independent both from the physiological system and an abstract system that elaborates symbols - in line with the phenomenological-experimental tradition, the meta-methodological instances could not but correspond to a model of explanation appropriate to experimental phenomenology.

4. Conclusions

Unlike the traditional objective of philosophy of science, establishing a valid general model of explanation for all disciplines, the present writing assumes that different models of scientific explanation respond to meta-methodological characteristics typical of each disciplinary context. Consequently, in as much as a paradigm is directed towards nomic, deductive and modal knowledge, the deductive-nomological model is in most cases the most suitable instrument. In the remaining cases, where the need for an explanation extends to more pragmatic aspects, the pragmatist approach will best meet such a need.

Neither the ontic approach, pivoting on the relevance of causal relations, nor the teleological-functional model, which answers questions on aims pursued by means of functions, seem appropriate to explanation within experimental phenomenology. This discipline, in fact, does not aim at establishing hypothetical causes that underlie the regularities obtained from immediate and direct observation, and even less to give up the nomic aim.

However, this does not mean that other disciplinary contexts, like cognitive science and neuroscience, might not incorporate the knowledge obtained from a "Science of observables". On the contrary, such knowledge is necessary for an exhaustive explication: to the extent that cognitive science and neuroscience are directed towards studying the perceptual system, and coherently adopt a teleological-functional model of explanation, the knowledge of the system's goal - the observables - is essential.

Just as essential is also the knowledge of the goal in function of theory testing: to the extent that knowledge of the observables is independent of the perceptual system, it is a necessary assumption logically connected to the hypothesis to be checked. In that sense the propaedeutics of knowledge of Experimental phenomenology is delineated.

Summary

This paper analyses several models of explanation and discuss the most suitable for a nomic, deterministic and modal domain. This domain is typical of those paradigms, like Gestalt psychology, experimental phenomenology, and only in some ways ecological psychology, that take observables as *explanandum*. Three lines of explanation are considered. The epistemic line identified explanation with a deductive and nomological process characterized by logic validity. The pragmatist line identified the objective of explanation in an answer to a why-question guiding explanation to the objective of highlighting the pragmatic, linguistic, contextual and epistemic conditions of the communication process. The teleological-functional line, which makes reference to a functionally oriented system aiming at a goal. In as much as a paradigm is directed towards nomic, deterministic and modal knowledge, the deductive-nomological model is in most cases the most suitable instrument. In the remaining cases the pragmatist approach will best meet such a need.

Keywords: Explanation, perception, nomic, deterministic, modal, epistemic, deductive-nomological, pragmatist, teleological-functional.

Zusammenfassung

Dieser Artikel analysiert einige Erklärungsmodelle und erörtert die Frage, welches für einen nomischen, deterministischen und modalen Bereich am besten geeignet ist. Dieser Bereich ist typisch für jene Paradigmen, die - wie Gestaltpsychologie, experimentelle Phänomenologie und in einigen Fällen ökologische Psychologie - Beobachtbares als ein zu erklärendes Ereignis ansehen. Drei Erklärungsrichtungen werden geprüft. Der erkenntnistheoretische Weg bestimmt die Erklärung durch einen deduktiven und nomologischen Prozess, der durch logische Gültigkeit gekennzeichnet ist. Die pragmatische Richtung kennzeichnet Erklärung als Antwort auf eine Warum-Frage, um so die pragmatischen, linguistischen, contextualen und erkenntnistheoretischen Bedingungen des Kommunikationsprozesses hervorzuheben. Die teleologisch - funktionale Richtung, die Bezug auf ein funktionell orientiertes System nimmt, richtet sich auf einen Zweck. Insofern, als ein Paradigma auf ein nomisches, deterministisches und modales Wissen gerichtet ist, ist das deduktiv-nomologische Modell in den meisten Fällen das am besten geeignete Instrument. In den restlichen Fällen wird der pragmatische Zugang am besten diesen Bedarf erfüllen.

Schlüsselwörter: Erklärung, Wahrnehmung, nomisch, deterministisch, modal, erkenntnistheoretisch, deduktiv - nomologisch, pragmatisch, teleologisch-funktionell.

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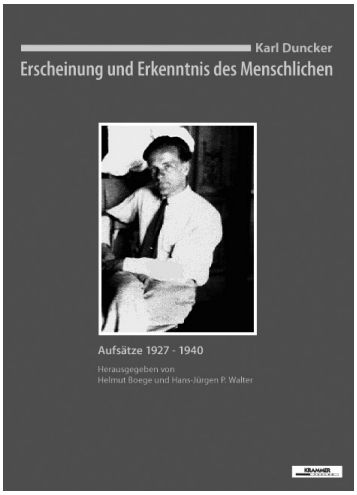

Karl Duncker

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Aufsätze 1927 - 1940

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Karl Duncker – 1903 in Leipzig geboren, 1935 aus dem nationalsozialistischen Deutschland in die USA emigriert, wo er 1940 aus dem Leben schied - zählt zu den bedeutendsten Vertretern der Gestaltpsychologie. Sein bekanntestes und wohl auch einflussreichstes Werk ist seine 1935 erschienene „Psychologie des produktiven Denkens“ (Verlag Springer, zweite Auflage 1963), das auch der so genannten „kognitiven Revolution“ in den USA und Europa wesentliche Impulse gab und bis heute die Denkpsychologie anregt.

Der vorliegende Sammelband stellt eine Reihe von Beiträgen Dunckers vor, die im deutschen Sprachraum bisher weniger bekannt geworden sind, obwohl sie alles andere als von bloß wissenschaftshistorischem Interesse sind. Der Bogen spannt sich von der Auseinandersetzung mit dem Behaviorismus über Grundfragen von Erkenntnis und Bewusstsein bis hin zur Zurückweisung des ethischen Relativismus und einer bestechenden Analyse menschlicher Emotionen und Motivation. Teils aus dem Englischen übersetzt, teils als Wiederveröffentlichung oder auch Erstersscheinung lange Zeit verschollener Originalarbeiten, belegen die hier versammelten Arbeiten die ungebrochene Aktualität des überaus differenzierten Denkens, Wahrnehmens und Forschens von Karl Duncker auch für die zeitgenössische psychologische, psychotherapeutische und philosophische Diskussion und Reflexion einer Reihe von Grundfragen der menschlichen Existenz.

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