

Report – Bericht

ON THE FOUNDATIONS OF EXPERIMENTAL PHENOMENOLOGY

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A time will probably come in psychology and philosophy in which it will be principle of method that the obvious characteristics of primary observational data are to be respected at their face value, whatever their relation to general preconceptions may be. It will then be acknowledged that we are not allowed to interpret black as really white, and here as actually elsewhere, unless we are forced to do so by further convincing observations. The time in which this rule will be generally accepted is likely to be remote. But it can be brought nearer only by one attempt after another to do precisely what the rule demands. The rule asks for phenomenology. (W. KÖHLER 1944, p. 203)¹

Today, 58 years after KÖHLER's remarks, Scientific Phenomenology (or Experimental Phenomenology) can boast an ample repertoire of discoveries, that is facts which not only represent a foundation of incontrovertible empirical knowledge, but also the *explanandum* on which other scientific disciplines can model new hypotheses in the abstract. Nevertheless, there is still an ambivalent attitude both of deference and diffidence towards Experimental Phenomenology. This attitude is the consequence of at least two factors: on the one hand a mixture of prejudices and misunderstandings and, on the other, a failing of the discipline itself: the lack of a theory.

Among the historical prejudices and misunderstandings which will be identified in the course of the present work, Experimental Phenomenology has been wrongly understood as a philosophical and speculative practice by some psychologists and identified as a scientific exercise by some philosophers. And yet Experimental Phenomenology is a scientific discipline that rejects by definition every scientific posture in favour of a rigorous philosophical reflection on the epistemological foundations.

However, Experimental Phenomenology does lack a theory that, starting from the formulation of observation laws, through hypothetical terms, might constitute higher order generalisations, with an added heuristic value. The lack of a unifying theory has prevented Experimental Phenomenology from becoming an autonomous discipline in the scientific community. It has not always been so: the *Gestalttheorie*,

¹ A rich array of excerpts from KÖHLER's and KOFFKA's phenomenology can be found in Henle (1979).

albeit as a theory within psychology, was an important theory for Experimental Phenomenology, just because it shared the same philosophical and meta-methodological premises. And it certainly cannot be so today because without the systematic knowledge of the laws of the empirical world it would not be possible to efficaciously keep to the irreplaceable preparatory role of Experimental Phenomenology, to the advantage of other scientific disciplines.

To go beyond the historical prejudices, to clear some misunderstandings and appreciate the actual contribution of Experimental Phenomenology to the current study of perception, Sergio C. MASIN organised a symposium on the foundations of Experimental Phenomenology at the Department of General Psychology, University of Padua, on 21st and 22nd February 2002. This was a wholly Italian initiative, justified by the importance that some famous Italian psychologists of the past have given in many ways to this discipline, including Vittorio BENUSSI (1878-1927), who taught Cesare MUSATTI (1897-1989), who in turn taught Fabio METELLI (1907-1987) and Gaetano KANIZSA (1913-1993).

The aim of the present work is to comment on the reports presented at the symposium and insert them in a concise historical, philosophical and meta-methodological context, to introduce Experimental Phenomenology.

1. A brief historical context of the Experimental Phenomenology

According to BOZZI (1999), references to phenomenology occur as early as in PLATO's "save phenomena", in ARISTOTLE's "to touch with the hand and describe, this is truth", in KANT's and the English empiricists' phenomenological analyses. Likewise, in Wolfgang GOETHE's scientific work we can read, albeit with some inconsistencies, the foundations of Experimental Phenomenology ahead of its time. Here is an excerpt from GOETHE on direct observation: "Man in himself, insofar as he makes use of his healthy senses, is the greatest and most exact physical instrument that there can be" (1829, n. 367).

Ewald HERING's phenomenological research on chromatic structures, recalled by Osvaldo DA POS in his presentation (*Priorities of phenomenology on physiology and physics in the study of colour*), should also be mentioned.

It was not until the end of the Nineteenth century and Franz BRENTANO that phenomenology obtained its systematic foundations. Although BRENTANO's phenomenology was oriented to acting and intentionality (see CHISHOLM 1967), in his work *Psychologie vom empirischen Standpunkt* (1874) he underlined the fundamental role of immediate and direct experience, and in his research on perception (BRENTANO 1897) he systematically adopted demonstration as the methodological instrument to prove the truth of a theoretical hypothesis. BRENTANO was the initiator of a new scientific-philosophical period. His lectures were attended, among others, by STUMPF, HUSSERL and MEINONG.

In the wake of the Brentanian tradition, two outstanding figures have developed the phenomenological School: Ernst MACH and William JAMES, both of them

originators of neutral monism. While the former elaborated a phenomenistic conception, even if basic in the philosophy of science, JAMES overcame the ontologic dualism with radical empiricism, that is the phenomenological project to radically return to the world of immediate experience.

In those years Gottlob FREGE for logic and Alexius VON MEINONG for perception demonstrated their independence from any activity or system that supports them. Through this operation every connection with psychologism was severed. However, the founder of phenomenology was Edmund HUSSERL. He introduced the *epoché*, that is to say that attitude which releases the mind from prejudices and turns 'back to the things themselves'. From here, HUSSERL's philosophical phenomenology would then be directed towards highlighting essential characteristics, as reminded by Maria ARMEZZANI's presentation (*Naturalisation of the phenomenological method in contemporary epistemology*). Further, HUSSERL founded certain knowledge on the apodictic evidence of experience (see SPIEGELBERG 1969).

Around this time, in Berlin, Carl STUMPF set up a laboratory from which Gestalt Psychology would originate. As emerged from Serena CATTARUZZA's detailed presentation (*Experimental Phenomenology: methodological aspects and axiomatic issues*), STUMPF has a place of honour in the history of Experimental Phenomenology because he was the first to define the scientific task of phenomenology. STUMPF's work was the basis on which WERTHEIMER, KÖHLER and KOFFKA developed their *Gestalttheorie*, in which Experimental Phenomenology reached its full development. Max WERTHEIMER's studies on the laws of perceptual organisation in the visual field are a model on which method is developed. In Wolfgang KÖHLER's work there are resources from which to elaborate the most advanced epistemology of Experimental Phenomenology. Just as far-reaching is Kurt KOFFKA's theoretical systematisation. To these must be added Kurt LEWIN's methodological reflections, a Gestaltist and a philosopher of science (see SMITH 1988).

According to HARTMANN: "The study was performed at Göttingen where experimental phenomenology appears to have been well established about 1910 under the direction of G. E. MÜLLER" (1935, p. 23). In actual fact, Edgar RUBIN's demonstrations of the laws on the figure-background articulation and David KATZ's research work on colour are paradigmatic examples of Experimental Phenomenology.

Experimental Phenomenology is above all a European discipline, which has a history of long and articulated reflection on philosophical and meta-methodological foundations. When Gestalt psychologists emigrated to the USA, it was almost impossible for them to establish the *Gestalttheorie* in that context. In Europe Experimental Phenomenology has had continuity mainly in Germany with Wolfgang METZGER, a Gestalt psychologist; in Belgium with the Leuven School under the leadership of Albert MICHOTTE, a major representative of Experimental Phenomenology (see THINÈS, COSTALL, BUTTERWORTH 1981); and in Italy with MUSATTI's pupils: METELLI and KANIZSA. In addition, Shiro MORINAGA's

Japanese school and, in some ways, James J. GIBSON's ecological approach should also be noted.

Paolo BOZZI's keynote lecture (*Foundations of Experimental Phenomenology*) opened the symposium. He described in detail his experimental work in KANIZSA's laboratory, as his pupil. In this way he introduced the most recent Italian context. Then, Ugo SAVARDI's presentation (*A theory for facts and relationships*), making reference to a theory in the sense of a KUHNian 'paradigm', gave the map of the Italian researchers who currently share this scientific project.

2. Phenomenology: philosophical presuppositions

In his *Principles of Gestalt Psychology*, KOFFKA defines phenomenology: "For us phenomenology means as naive and full a description of direct experience as possible" (1935, p. 73). Yet, phenomenology must not be confused with Experimental Phenomenology. This would be a serious mistake, especially if Experimental Phenomenology were to be taken to be a purely descriptive exercise. However, at this point we shall not pursue the scientific aspects of phenomenology; for the time being, some philosophical presuppositions will be addressed by identifying: 1) the attitude and 2) the object of phenomenology.

2.1. Phenomenological attitude.

The phenomenological attitude adopted in the scientific field coincides only in part with HUSSERL's method of reduction: with the negative instance. A telling definition of the phenomenological attitude was formulated by METZGER:

"To simply accept the facing thing as it is, even if it appears unusual, unexpected, illogical or senseless, and even if it goes against undoubted axioms or familiar ways of thinking. To let the thing speak for itself, without indulging in what we know, or we previously learned, or in what is obvious, in the knowledge of subject, in logical demands, in linguistic prejudices, or in the insufficiency of our vocabulary. To stand before the thing with reverence and love, and, if anything reserving our doubt and mistrust for the premises and concepts we have so far used to understand the world of data" (1963, p. 12).

Thus, the phenomenological method requires a specific negative attitude towards what is observed: an attitude that must *not* be influenced by knowledge, must *not* be sidetracked by hypotheses, must *not* be traced back to categories - even though what is observed falls within a category, may be subject to hypothesis, and activates a network of knowledge. In sum, through immediate experience, the phenomenological method allows only the phenomenal world to filter through.

Here the usage of two ambiguous terms, often superimposed on the immediate experience, must be clarified: introspection and subjectivity. It would suffice to read the first chapter of KÖHLER's *Gestalt Psychology*. In any case, after taking due distance from the type of introspection practised at Würzburg, the introspective method of phenomenology (which should be called *extro-spective* in order to avoid any ambiguity), as observation of immediate experience, does not imply the subjectivity of a private world; on the contrary, it concerns only the objectivity of pub-

lic, and therefore inter-subjective, phenomena. And this is valid not only for phenomenology, as KÖHLER says:

“Hence, the exactness of my observations in physics cannot be related to an alleged avoidance of direct experience in physical research. I do not avoid direct experience when I am working in physics; for I cannot avoid it” (1947, p. 26).

2.2 The object of phenomenology

In contrast to English empiricism, phenomenological empiricism does not turn towards the causes that produce the experienced world, but rather towards the experienced world to establish certainty of knowledge on the basis of apodictic evidence.

Phenomenology confines its own field of investigation within the limits of immediate and direct experience. In any case, immediate experience is by tradition what constitutes the subject of the psychological investigation (WUNDT 1896). It is useful to distinguish between immediate experience - a fact - and direct experience - a hypothesis. Both definitions can be made in negative terms: immediate means without making use of instruments (e.g., telescope) or of processes (e.g., memory); direct means without the help of inferences (e.g., unconscious).

The debate about immediate *versus* mediate observation mainly relates to the issue of scientific realism, which is particularly important in the field of particle physics. Giovanni B. VICARIO's contribution (*Does Experimental Phenomenology exist?*) adopted Grover MAXWELL's argumentation (1962), by which the *continuum* between free and instrumental observation would threaten a possible definition of non-instrumental observation. VICARIO, then, asked the sphinxian question on the meaning of immediate observation. Although an answer was offered long ago by one of SEXTUS EMPIRICUS's ethical arguments and was then reformulated by VAN FRAASSEN (1980), if the reasoning underlying such a question were correct, one could maintain that incest is not immoral: if Oedipus touches Jocasta with his foot he does not commit an immoral act, and from then on what changes will do so by degrees. The issue of the *continuum* between mediate and immediate observation can be ascribed to the vague predicates of natural language, a problem that can be solved with cases and counter-cases which determine the difference between the two opposed ends of the *continuum*.

As regards direct versus indirect experience, the literature within psychology of perception is far more extensive. In the 1980s it led to a polarization between representatives of Ecological Psychology (GIBSON 1979; MICHAELS & CARRELLI 1981; TURVEY, SHAW, REED & MACE 1981) and those of the neo-HELMHOLTZian cognitive approach (ROCK 1977; FODOR & PYLYSHYN 1981; MARR 1982). Philosophically this is a never ending opposition, as it necessarily comes down to a theoretical choice, yet one with a remarkable significance for philosophy of science in the empirical test of theories. Apart from that, Experimental Phenomenology is grounded in direct experience and does not avail itself of cognitive integrations, as underlined by Natale STUCCHI's presentation (*Seeing and thinking: the origins of "Experimental Phenomenology"*).

Experience does not present itself as a chaotic, indeterminate flow; on the contrary, organised objects and events, generally stable and characterised by specific qualities, can be recognised. However, if observation tends towards objects and events which are organised within experience, one must not necessarily assume every principle of intentionality. In this connection, Nicola BRUNO's presentation (*KOFFKA's two questions: advantages and limitations of the phenomenological approach*) aimed at highlighting the limitation of Experimental Phenomenology by identifying the content of experience with a symbol standing for an Intentional object. However, according to this particular reading of intentionality, based upon SEARLE (1983), the Intentional object transcends experience and therefore phenomenological reality. And so this theory of intentionality is not consistent with Experimental Phenomenology, and neither is BRENTANO's theory of intentionality. For an introductory reading on this issue reference can be made to RUSSELL (1921). It can be maintained that Experimental Phenomenology must draw from intentionality only the principle that a single experience implies necessarily *one* object and *one* phenomenal event, and nothing more.

Furthermore, objects and events of experience can be defined as *observable*. The suffix *-able* specifies that the object being studied is not the observed phenomena *here and now*, but the observable phenomenal reality - a phenomenalist option is not assumed. The presupposed real world can be not-given to an inaccurate observation, but if the observation is accurate it will be given.

Lastly, the scientific object of Phenomenology had already been identified by STUMPF: structural laws. First of all, structural laws must not be confused with the descriptions of mere facts and, secondly, they are characterised by 'If ..., then ...', even if they are not causal. In this sense, Sergio C. MASIN's presentation (*The issue of the appearance of phenomenal objects*) showed that Experimental Phenomenology cannot isolate the essences that cause perceptual phenomena. Experimental Phenomenology must stay within its own ontological level: the relationships it highlights are necessarily intra-phenomenal functional dependences (see GRELLING & OPPENHEIM 1939).

3. Experimental Phenomenology: meta-methodological presuppositions

KANIZSA says: "Experimental Phenomenology, (...), has been able to establish some laws which rule the phenomena of vision (...). Apart from the often very different interpretative models proposed by the scientists who have made such discoveries, these empirically ascertained regularities are not hypotheses, they are facts and as such they must be accepted. They can be discussed, but not denied nor neglected" (1991, pp. 80-81). Facts under observation follow *incontrovertible* laws. Thanks to these laws, stability is ensured to the world; perhaps so much so that the phenomenological-experimental research seems to some as something to be taken for granted or nomologically irrelevant. However, such individuals do not consider that in many cases this basic knowledge not only specifies the *explanandum* of their discipline, but also constitutes a *corpus* of assumptions logically connected to their

theories and is therefore an essential premise for the scientific proof of their hypotheses. In this connection, SINICO's presentation (*Instantiae Crucis in Experimental Phenomenology*) maintained that the principal method of Experimental Phenomenology is demonstration, with the experimental aim of highlighting functional dependences between intra-phenomenal variables.

The method of demonstration is not experimental in a strict sense (it does not supply a probabilistic result corresponding to a sample of experimental and a sample of control participants), but rather in a broad sense (as a systematic and controlled variation of a phenomenal variable in function of another phenomenal variable) and as such, contrary to what BORING (1950) presumed, it is a scientific method. Simply, the demonstration method is justified by the nature of the object under investigation. If anything, it is the reasoning underlying the criticism of this method which is bizarre. The noble sciences - physics - are necessarily abstract and symbolic because of their mediate relationship with the empirical world (DUHEM, 1906). The limitation of hypothesis testing has been brilliantly overcome through a refined methodology. The latter has become the model of scientific nature, so much so that it is required also in disciplines that, like Experimental Phenomenology, do not have the same limitation.

The meta-methodology of Experimental Phenomenology has three cardinal criteria: observability, inter-observability, repeatability.

The scientific nature, and therefore the test of Experimental Phenomenology's laws, is constrained by the observability criterion. The scientific test of Experimental Phenomenology actually requires one to refer to what is under observation. Hence, for Experimental Phenomenology a mean is not a result: none out of 10 individuals sees the difference between two colours, but if they perform 100 tasks, statistics says they do discriminate. Even if, presented again with the two colours, all 10 individuals will continue to see no difference between them. Experimental phenomenologists do not question this type of results, but do not give them a phenomenological value. Further, they do not deny that Experimental Phenomenology's laws might have measurable confirmation based on the detection of the boundaries of their confirmability. More precisely, everybody agrees that the qualitative is a pre-condition of the quantitative (KOFFKA 1935; LEWIN 1944). Experimental Phenomenology is a science of qualitative: systematic experimentation is applied to study the qualitative dimensions of experience. This notwithstanding, measurement is considered an important phase of research on the phenomenal world: in fact, once a law has been found, changing one or more phenomenal variables, epistemic conditions (usually called stimuli) can be studied within which the law can be confirmed. See for example, KORTE's studies on the stroboscopic movement (1915) or BROWN's studies on velocity (1928).

The second meta-methodological criterion of Experimental Phenomenology is inter-observability. It is not enough for an observer to notice a phenomenon, it is necessary for the phenomenon to be inter-observable. This criterion ensures the inter-subjective validity of the method. The inter-subjective variability may also concern some plurivocal phenomena. Plurivocality, as such inter-observable, will be Experimental Phenomenology's subject matter, while inter-individual differences

will be addressed by other disciplines. Objectivity shared by direct and immediate experience is indispensable not only for the everyday needs of life but also for science. If this assumption were rejected, serious consequences would exist at the level of empirical test, consequences that theorists of the *theory laden*, under the excitement of having delivered science from immediate observation, have forgotten to take into consideration.

The third criterion: the observation of Experimental Phenomenology's laws must be repeatable. Given an observational law, under the same conditions the law must again be observable. To comply with this criterion it is useful to supply an operational definition of the epistemic conditions of the object under investigation. Useful in this sense is a type of psychophysics which must in any case have a subordinate role to the phenomenal results. This issue was addressed by Clara CASCO (*Study of conscious and unconscious perception: phenomenological, psychophysical and psychophysiological methods compared*). However, in this connection, Walter GERBINO (*The place of Phenomenology within the cognitive science*) doubted that the results of Experimental Phenomenology could add something to other disciplines investigating vision and aiming at learning about it in a pluralistic and explanatory way. Franco PARACCHINI's presentation (*A compatibilistic or a non-compatibilistic Experimental Phenomenology?*) provided an answer at the level of philosophical foundations by showing the irreducibility of the phenomenal plane to the naturalistically conceived world and how the genesis of the latter is the product of knowledge of the former.

However, the explanatory value of Experimental Phenomenology still has to be accounted for. The philosopher of science knows that the explanation is an open question. In any case, if the explanation implied reference to theoretical premises, the lack of a theory, as already said above, would inevitably confine Experimental Phenomenology to a marginal place within cognitive science. But when the explanation refers to phenomenal premises also within the classic deductive-nomological model - through structural laws as covering laws - Experimental Phenomenology is explanatory in every respect.

4. By way of conclusion

Phenomenology and Experimental Phenomenology do not lend themselves to schematisation. And the present report cannot be considered as an all-inclusive framework. A good in-depth analysis remains BOZZI's *Fenomenologia Sperimentale* (1989).

In addition to those mentioned above, other presentations given at the symposium analysed in depth issues that are specific or collateral to Experimental Phenomenology: Marco SAMBIN (*In the beginning was the phenomenon*), Ivana BIANCHI (*On the Phenomenology of identity and contrariness*), Pietro KOBAN (*"Psychologia empirica, methodo scientifica pertractata": prehistory of Experimental Phenomenology?*), Paolo BONAIUTO and Valeria BIASI (*Experimental Phenomenology and human motivations: self-perception, images and meanings*),

Anna Maria GIANNINI (*Phenomenological analysis and experimentation on the theme of humoristic images*). This also shows that in the Italian research are the beginnings of a remarkable revival of Experimental Psychology.

Zusammenfassung

Der vorliegende Bericht kommentiert das Symposium „On the Foundation of Experimental Phenomenology“, das vom 21. bis 22. Februar 2002 in Padua/Italien abgehalten wurde. Dabei wird, um den Lesern die experimentelle Phänomenologie vorzustellen, kurz der historische, philosophische und meta-methodologische Kontext dieses Ansatzes nahegebracht.

Die experimentelle Phänomenologie ist eine vorwiegend europäische Disziplin mit einer langen Tradition eingehender epistemologischer Reflexion, die ihre wichtigsten Wurzeln in der Gestaltpsychologie hat. Haltung und Gegenstand der Phänomenologie werden hier in ihrem philosophischen Kontext dargelegt. Unter dem meta-methodologischen Aspekt werden drei Kriterien diskutiert: die Beobachtbarkeit, die intersubjektive Beobachtbarkeit und die Wiederholbarkeit. Anhand dieser Kriterien formuliert die experimentelle Phänomenologie systematisch Gesetze der qualitativen Dimensionen phänomenaler Erfahrung.

Summary

In commenting a symposium on the Foundation of Experimental Phenomenology (Padua, 21st and 22nd February 2002) the present work provides a brief historical, philosophical and meta-methodological context with the aim of introducing Experimental Phenomenology.

Experimental Phenomenology is above all a European discipline with a long tradition of articulated epistemological reflection which has its main roots in the Gestalt Psychology. Within a philosophical context the attitude and the object of phenomenology are expounded. As regards meta-methodology, three criteria are discussed: observability, inter-observability and repeatability. Through them Experimental Phenomenology systematically formulates laws of qualitative dimensions of phenomenal experience.

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