

MONA LISA'S SMILE: THE PLACE OF EXPERIMENTAL PHENOMENOLOGY WITHIN GESTALT THEORY

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In memory of Paolo Bozzi

For years brilliant research has issued from the Italian school of Gestalt psychology.* Psychologists trained in the gestalt tradition and working outside of Italy, however, may be puzzled by the recent occurrence of Italian research conducted under the banner of “experimental phenomenology” (*fenomenologia sperimentale*) (KANIZSA 1983; BOZZI 1989; MASSIRONI 1998). Indeed, most of the best experimental psychologists trained by Gaetano KANIZSA and Fabio METELLI, including Paolo BOZZI, Giovanni VICARIO, Manfredo MASSIRONI, Ugo SAVARDI and others have taken up this mantra, going so far as to establish the “Laboratory of the Experimental Phenomenology of Perception” [*Laboratorio della fenomenologia sperimentale della percezione*] in Verona (e.g., BIANCHI & SAVARDI 2002).

At first sight this appears to be an outright rejection of training in Gestalt psychology in the manner of Irvin ROCK’s famous move toward cognitive inferentialism. Indeed, there is complexly related to the rise of Experimental Phenomenology a move toward GIBSONian realism or Austrian (as opposed to classic Berlin) theorizing. It is the purpose of this article to examine the writings of the various practitioners of Experimental Phenomenology to see exactly what their theoretical commitments are.

As we shall see, the hegemony of Gestalt psychology is taken for granted in Italy so the change of terminology is not as drastic as might at first be thought. Instead, Experimental Phenomenology carries on many commitments with Gestalt psychology. This is the recent conclusion of Mario ZANFORLIN (2004) who sifts through the various writings of Italian psychologists to extract where things stand. Asking “Is Gestalt psychology still alive in Italy?,” he concludes that most Italian researchers are “Gestalt theoretical.” Writing from a more distant viewpoint, I want to see more generically what specifically constitutes Experimental Phenomenology and Gestalt psychology.

What I will conclude is that Experimental Phenomenology represents a clarification of terminology that is highly useful in today’s psychological scene and allows

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different practitioners to appreciate an important methodological element within classical Gestalt psychology - phenomenology - without accepting its larger commitments ('experimental phenomenology as propaedeutic'). Nevertheless, I define a space within Gestalt psychology where Experimental Phenomenology can fit.

The first part of the article will be spent explaining the complex reasons for the rise of Experimental Phenomenology. The second part is an analysis of the concept of 'realism,' undertaken to draw out and separate ontological and epistemological ambitions behind the adoption of Experimental Phenomenology. The last part will constitute a reconstruction of Experimental Phenomenology, using the example of the arts to show its power.

The Rise of Experimental Phenomenology

One finds in the pages of Gaetano KANIZSA's writings attention to the minutest of perceptual effects - phenomenal margins, shrinkage, amodal completion. There is a true love of perceptual phenomena that comes before the need to formalize and theorize. Often times KANIZSA's work raise thorny issues because he produces illusions that have no ready explanations. Instead, by intense and innovative variation of the conditions of the illusion he strikes humility in the researcher armed with their ready theories. From here, however, he passes on to the traditional researcher's apparatus of experimentation and analysis of results.

This is the essence of Experimental Phenomenology as a *research methodology*. On the other hand, Experimental Phenomenology as a *defensible theory* and sometimes alternative to Berlin Gestalt psychology has arisen due to a number of complex, interrelated factors that I hope to help disentangle. I would reduce these to three main issues: (1) an embarrassment in KÖHLER's brain research, (2) a belief that psychological research could be purified to isolate pure phenomenological knowledge, and (3) the hopeful belief that the phenomenological method places one on a firmer philosophical footing when one attempts to understand the relationship to philosophical knowledge.

Experimental Phenomenology is most identified theoretically with the name of Paolo BOZZI, who wrote a book titled *Fenomenologia Sperimentale* (1989). Since it is BOZZI who first raised the banner of Experimental Phenomenology as a way to organize research it is useful to follow his career and trace the point when he first felt that classical Berlin theorizing was inadequate in some way.

BOZZI's (1958, 1959) earliest work was an experimental analysis of naïve physics, through an examination of naïve attitudes to pendular motion and a ball rolling along an incline. Similarly, with Giovanni VICARIO (1960), he studied WERTHEIMER's rules for perceptual grouping through the example of musical tones, and VICARIO (1960) discovered a 'tunnel effect' in hearing. All of this research focused on events, in the manner of MICHOTTE's research on perceptual causality, and might be seen to be calls for perceptual 'ecology,' but they were conducted from a more or less orthodox viewpoint. This is confirmed by BOZZI's (1969/1989) discovery of a new principle of perceptual organization - directionality - that he added to WERTHEIMER's list (Fig. 1).

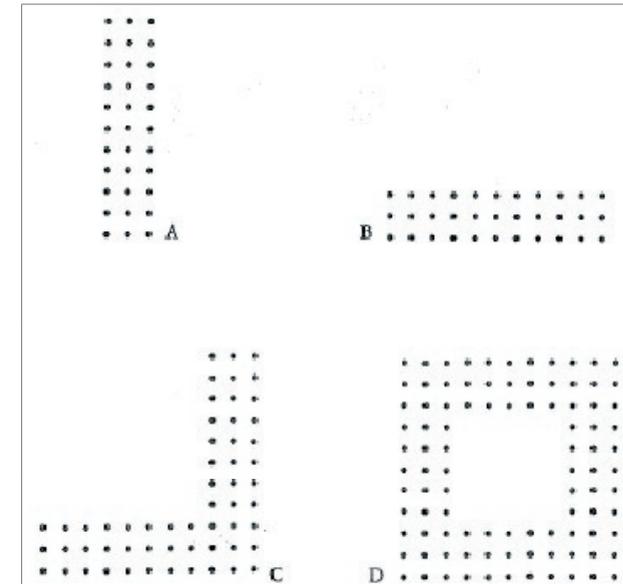


Fig. 1 When similarity and distance are held constant, directionality determines organization (BOZZI, 1969/1989).

Many of the papers that came to constitute BOZZI's *Fenomenologia Sperimentale* (1989) were published in the 1960s, however, his turn toward a more realist theory does not seem to have occurred until the 1970s. This emerged, once again, based on a tripartite disappointment with KÖHLER's brain theory, the rise of phenomenology, and an alternative philosophical underpinning, whether Austrian or GIBSONian.

Because BOZZI and VICARIO were working on the perception of events, MICHOTTE's methodological position must have appeared more correct. Interested in Gestalt phenomena he was not concerned to reduce them to a physical gestalt theory. He was a pure practitioner and this is what BOZZI and VICARIO saw fit to be. Perhaps a confirmation of this was the publication of a tract by a student of MICHOTTE, a French parallel to events in Italy (THINÈS, 1977). At the same time, the brilliant research of Vittorio BENUSSI, KANIZSA's theoretical 'grandfather' (through his teacher MUSATTI, a student of BENUSSI), might have appeared to be a model. This would be further attractive because the Graz model of BENUSSI did not have the clumsy neurological baggage of KÖHLER. On the other hand, VICARIO (1993) has nominated Carl STUMPF's research, particularly in the *Tonpsychologie* (1883-1890) as a model of Experimental Phenomenology. I will return to this fortuitous example.

Although reference was made to some sort of simplicity or Prägnanz principle in classic research like METELLI's (1974) on transparency, there was increasing impatience that such terms making reference to a transcendental process were unnecessary. This is clear from KANIZSA and LUCCIO's analysis of the Prägnanz concept (KANIZSA & LUCCIO, 1985). At this point, the Italians must have felt themselves closer to GIBSON than Berlin as is evidenced by KANIZSA and LEGRENZI's forward to BOZZI's *Fenomenologia Sperimentale* where they write of his "extreme realism" (*radicale realismo*).

But the reemergence of interest in Austrian philosophy conveniently offered a way to systemize their findings. Beginning in the late 'seventies and early 'eighties seminal research on the school of Franz BRENTANO began to emerge from scholars like Barry SMITH, Kevin MULLIGAN and Peter SIMONS (SMITH 1982, 1988, 1994). Basing its method on the rich ontological theory of parts and wholes developed by BRENTANO and his successors, these scholars not only articulated the philosophical ideas underlining Berlin and Graz psychology but even found traces of Graz psychology in present-day Italian psychology (SMITH 1988), an enterprise that has been fruitfully pursued by Liliana ALBERTAZZI (2003).

As noted BOZZI was an independent thinker, taking bits and pieces from different sources. He neither accepted fully either GIBSON's theory (although he claimed to have anticipated something like it), nor Graz theorizing, often criticizing it (BOZZI 1989, 291; 1992). In any case, it can be seen immediately that there has been no attempt to ally experimental phenomenology with the larger phenomenological movement (SPIEGELBERG 1972; IHDE 1986). Except perhaps to the degree that HUSSERL's early works contain ontological reflection, is the philosopher most connected to phenomenology even mentioned. This has raised consternation by some, who seek out a unification of Experimental Phenomenology to classical philosophical phenomenology (e.g., ARMEZZINI 2003). But the lesson is clear, that the phenomenology we are dealing with is a common-sense methodological point as framed originally by Gestalt Psychologists and not philosophers.

Nevertheless, by a conspiracy of silence the Austrian theory has become the default philosophical underpinning of Gestalt psychology in its most promising guise (that is, the Experimental Phenomenological guise), in Italian psychology. Perhaps the establishment of a Laboratory of Ontology [*Laboratorio di Ontologia*] by a pupil of BOZZI, Maurizio FERRARIS, signals a final acceptance by BOZZI of the theory. But we do not know.

In any case, the question has never been asked to what degree does that philosophical move augment 'realism' that the practitioners of Experimental Phenomenology like BOZZI were moving toward? Nor has it been asked how this would relate to earlier positions staked out by Berlin theory of an *epistemological* nature. For if SMITH et al. have explained adequately the difference between the ontological units utilized by Berlin theory (super-summative wholes) versus Graz theory (qualities or moments), they have not dealt with the well-known gestalt commitment to critical realism. What is troubling with this situation is that critical realism is not only a dualist epistemology but also a form of *depth ontology*, for in positing two realms of knowledge one also posits two ontological strata, which could be called the *intransitive* and *transitive* realms. How does depth ontology relate to the ontology of mind investigated by Austrians?

In fact, as SMITH et al. point out by making reference to the seminal works of Edwin RAUSCH (1966), we need as rich a set of ontological tools as we can get. The problem is that these tools are never directed to other than acts of the mind. How are they applied elsewhere? Where does science fit into the equation? Here, I believe, we have a complex series of unspoken beliefs about 'realism,' of a mixed epistemological and ontological nature that need to be disentangled.

'Realism'

I have argued that attention to ontological themes of mind suggested by Austrian philosophers is to be commended, whenever the phenomenology of experience calls for it. However, we should stress that this relates to an *ontological adequacy* rather than an *epistemological gain*. For it is sometimes held that 'realism' results from this move. This requires some deliberation on the meaning of realism.

Realism implies both an ontological and an epistemological commitment, first, that the world *exists*, and second, that we access it *objectively*. The first is held by all realists and can be forgotten for now. The second point is what is more contentious. This is what partially disappointed BOZZI when he said to me in conversation once that if Gestalt psychology had been doing its job GIBSON's revolution should never have been necessary. Something about BOZZI's, KANIZSA's and others 'move to realism' is toward epistemological objectivism as just defined.

Perhaps spurred by BOZZI, some Italian psychologists made direct overtures toward GIBSON (GERBINO 1988). Others found the element necessary for realism within BOZZI's writings, as did KANIZSA and LEGRENZI (BOZZI 1989) above. However, in no case can ontological realism be confused with epistemological realism. Austrian theory really has no epistemological theory and this is part of its appeal because in ontologizing everything, it seems to give it a pure, uncontaminated reality. To take the example of KANIZSA's (1985) distinction between 'seeing' and 'thinking,' one can see that an ontological division is taken in some senses to be an epistemological gain. KANIZSA devised many illusions that are cognitively impenetrable, and reserve a space for pure seeing, free of thinking. A glance back at BENUSSI shows why this might seem to disclose submerged epistemological consequences, for in BENUSSI's thinking the level of seeing, before gestalt 'integration' (according to MEINONG's production theory) is pure sensation connected physically to the object. In reality, the fact that one can separate cognitively penetrable from impenetrable realms is irrelevant if KANIZSA's level of 'seeing' isn't veridical in the first place (VERSTEGEN 2001)!

Rejecting critical realism with GIBSON, Austrian philosophy, and perhaps BOZZI, some Italians would have to claim to naïve realism of some variety or other. There is nothing objectionable in this, but as I will show the separation of ontology from epistemology makes the choice more difficult to commit to. For naïve realism reduces epistemology, once again, to a pseudo-problem. It makes knowledge a single, monistic realm and cannot theorize the transcendent, hypothetical objects of science and its objects.

Not for nothing, naïve realism is a theory that has been consistently criticized by gestalt theorists throughout the twentieth century and included among its targets Ralph Barton PERRY, Gilbert RYLE, and others (KÖHLER 1938; MANDELBAUM 1963, 1964; BISCHOF 1966; METZGER 1972; HENLE 1974; c.f. VERSTEGEN 2000b). One of the most potent tools of the critical realist critique of naïve realism is the linguistic analysis of a double language (KÖHLER 1929/1971; PASTORE 1992). Ironically for this discussion, that has been brilliantly utilized to critique naïve realist sense-data theory by the Italian psychologists Paolo LEGRENZI (1975) and Maria SONINO-LEGRENZI (1982).

KÖHLER showed what a tricky balancing act it is holding the physical and phenomenological in their place. His critical realism takes for granted that physical facts have *ontological* priority in the realm of the real while phenomenological facts have *epistemic* priority in the realm of the empirical. This strict separation of ontology from epistemology destroys the possibility of committing what later philosophers have called the ‘epistemic fallacy,’ of mistaking our knowledge of objects for the being of objects.

Naïve realism is not the method to increase epistemic ‘realism,’ because it is only done at the expense of this critical distinction. Although GIBSON’s writings have been promising, he has never solved this problem, which is why generations of gestalt and gestalt-oriented psychologists have been disappointed with his hopefully prophetic but ultimately disappointing pronouncements (PRENTICE 1951; c.f., EPSTEIN & PARK 1964; EPSTEIN 1977, 1982; PROFFITT 1999). Psychologists still call themselves ‘GIBSONians’ but more than likely their experimentation show an implicit use of critical realist principles.

A practical outcome of a critical realist uncoupling of world and representation is a freeplay for symbolism. One of the most dismal aspects of GIBSONian theory, for instance, is its reductivist discussion of the visual arts to naturalistic representation, something that was consistently pointed out by Rudolf ARNHEIM (1979). Many people talk about how GIBSON’s theory of ‘affordances’ carried on gestalt research on KÖHLER’s ‘requiredness,’ LEWIN’s *Aufforderungscharakter*, and ‘tertiary qualities,’ however, ‘affordance’ is a purely practical concept and has nothing whatsoever to say about non-adaptive stimuli (e.g. art).

If Experimental Phenomenology becomes a naïve realist theory it risks losing all the benefits just listed above. On the other hand, the commitment to phenomenology by critical realist theory assures a priority to the here-and-now of lived experience via epistemic priority. Accepting the ‘critical’ element of its realism is a concession to epistemological and ontological complexity, because it is the only way to assure ontological priority as well. Experimental Phenomenology cannot be both naïve and critical at the same time. If ‘naïve’ realism is taken in this watered-down sense, it really has no meaning because there is no commitment. If this is so, it is best to dispense with it and return to critical realism.

A Workable Definition of Experimental Phenomenology?

Since as I noted BOZZI, the most articulate spokesman, never stated other than that Experimental Phenomenology is a fundamental research methodology (although he vaguely believed it to promote ‘realism’ in some way), we might seek to provide some workable definition for Experimental Phenomenology as it is practiced today. Furthermore, if Experimental Phenomenology can be seen as the propaedeutic arm of Gestalt psychology, founded on an acceptance of its epistemic priority, it will be seen to be an irreplaceable way to begin and consolidate research.

This involves reframing experimental phenomenology as a more richly defined propaedeutic for psychological research within the larger framework of gestalt theory. In this sense, one can stay with it or move beyond it (and I will give reasons why we

will more often than not move beyond it), but at least theoretically it provides its own space. Then if we indeed do move beyond it, we might even be said to be practicing gestalt experimental phenomenology.

It is here that it is opportune to return to VICARIO’s (1993) interesting invocation of Carl STUMPF, who was after all the teacher of the Gestaltists. VICARIO, as noted, mentioned STUMPF’s *Tonpsychologie* (1883-1890) as an ideal application of Experimental Phenomenology, but we go back even farther to his *Über den psychologischen Ursprung der Raumvorstellung [On the Psychological Origin of the Presentation of Space]* (1873). In that work, he posited the existence of two types of mental contents, which he called self-subsistent contents (*selbständige Inhalte*) and partial contents (*Teilinhalte*). He wrote, “Independent contents are present there, where the elements of a complex of presentations could also in virtue of their nature be presented separately; partial contents where this is not the case” (109; cited in SMITH & MULLIGAN 1982, 27). STUMPF’s paradigmatic example was the contents of hue and brightness in the case of color. One cannot “present to oneself” hue without brightness, and brightness without hue. These relations, therefore, are mutually correlated; neither can “be presented” separately, and thus are dependent.

As SMITH & MULLIGAN (1982) point out, STUMPF had not yet formalized this into a general ontology, but all the better, for the method’s similarity to BOZZI’s is striking. BOZZI (1989) argued that the task of Experimental Phenomenology is to search for percept-percept couplings, “partial contents” in STUMPF’s words. These are not general ontological entities after all, but psychological data. The same kind of psychological data that KÖHLER took for granted when he argued that phenomenology must serve as a propaedeutic! These phenomena are investigated in their own right, agnostic to the question of realism. This brings us close to KANIZSA’s and BOZZI’s love of phenomena for their own sake.

Gestalt psychology always demanded that the phenomenological method be the starting point of investigation, a so-called propaedeutic. Indeed, what is interesting is that Italian Gestalt psychology developed in close collaboration with the most orthodox of post-war Germans, Wolfgang METZGER. He wrote that we ought “to simply accept the facing thing as it is... to let the thing speak for its own, without indulging in what we know, or we previously learned, or in what is obvious, in the knowledge of the subject, in logical demands, in linguistic prejudices” (METZGER 1963, 12). It is significant to couple this statement with the example that METZGER provided in his own research. It is well known that he did few experiments in his later years and tended to display powerful illusions and visual effects to make his points. Therefore, Experimental Phenomenology was provided a powerful precedent in the most orthodox theories of METZGER himself.

However, as noted in my brief analysis of KANIZSA’s working method, we find that as a methodology Experimental Phenomenology is not only an exhaustive variation of perceptual effects but also develops into sophisticated research programs of a mainstream and quantitative nature. No Experimental Phenomenologist has restricted herself to intersubjective observation but instead they use experimentation and statistical analysis of results. There has been a debate in Italian experimental psychology whether or not this constitutes an independent science or a trespassing into a new territory.

BOZZI (1989) clearly believed that Experimental Phenomenology was an independent science, distinct from psychology or even psychophysics. His aforementioned discussion, for instance, of “directionality” in perceptual organization, was retroactively argued on its republication to be conducted purely in phenomenological terms (BOZZI 1969; 1989, 123-153). This series of experiments, in which BOZZI claimed to add a new factor to WERTHEIMER’s list of principles of organization, used purely phenomenal variables in order to proceed. Although BOZZI satisfies our desire for an independent Experimental Phenomenology, he also describes a science that is somewhat isolated.

VICARIO (1993) was not so sure, arguing that insofar as we must deal with transcendent subjects in psychology, like “memory, habits, motives, and so on” we have to move beyond phenomenology. This raises a large issue about hypothetical objects and the critical attitude used to unify results via hypotheses, theories, and models (including metaphors and analogies). I will conclude that there is really no strict dividing line between phenomenology and organized science but that this does not diminish the value of the rubric of Experimental Phenomenology.

Perhaps the best way to establish this is to take a prototypical example of Gestalt psychology and show the interdependence of phenomenological and analytic approaches. Hans WALLACH’s (1963) discovery of luminance ratios in achromatic perception is useful here. Gestalt theory has always taken seriously the way in which stimuli mutually interact. The fact that this immediately suggested the field analogy is already problematic because basically students in Berlin the 1920s and 1930s used a physical construal to predict changes in relational determination in various perceptual situations (BROWN, DUNCKER, OPENHEIM, WALLACH, etc.). WALLACH’s discovery of luminance ratios was led by such an attitude and while he practiced exhaustive variation of stimuli, he was already looking for a simple, unifying principle that might organize his results.

“Transdiction” has been noted by philosophers of science as a primary aim of scientists, the inference from the observed to the unobserved. This has been the path of experimental science since DESCARTES, LOCKE and BOYLE where inference goes not only to potentially verifiable entities, as for instance through a micro- or tele-scope, but even objects that “cannot in principle be observed“ (MANDELBAUM 1964, 63; MANICAS & SECORD 1984). Needless to say, contemporary experimental physics and chemistry relies extensively on transdiction and it is clear that psychology does too.

When we think about how far we are already implicated in transdiction when we begin research we can see that even Experimental Phenomenology is a give and take between phenomenological and analytical attitudes. The underestimation of transdiction can lead to a simplification of issues surrounding realism, in the sense developed above. For example, turning epistemological questions into simple problems (“Does red really exist?”) plays into the hands of naïve realism. The post-BERKLEYian simplification of the discussion of primary and secondary qualities precisely oversimplifies the ground staked out by DESCARTES, LOCKE and BOYLE, for whom such a question could not even be posed without the results of science (MANDELBAUM 1964; SIMMONS 1994; c.f., NORRIS 2003)!

The problem has to do with “the given.” Here we must distinguish between “the given” and constructions above and beyond direct perception. According to MANDELBAUM (1964), we must be aware of ignoring our own understanding of mechanisms even in relatively simple cases of perception. For example, when we see an illusion such as the distortion of color on the horizon and get closer to see that it is that, only an illusion, we are already on the path to science. It is impossible to cut phenomenal perception from the hypothesis of underlying mechanisms, of which neurobiology is only one. Perception is always already causal because we cannot help but to hypothesize the mechanisms that explain what we observe in life. The same goes naturally for the laboratory.

Perhaps the confusion would be lifted if we recall that simplicity obtains also in the world itself. If we do not adopt the natural science attitude long enough, we are liable to look in vain for evidence of our phenomena in the transcendent world (world-percept isomorphism). This fact has been pointed out by ARNHEIM (1974) who remarked on the fact that the laws of nature not only operate on how we see but also on *that which is in the world*. Natural shapes are formed according to physical laws and so when our visual system works in the same way, we arrive at veridical percepts; or as Fritz HEIDER (1988) has put it, we must also focus on “what features does the world[,s] structure have, that thought economy pays - that it leads to veridical ideas and [does] not lead us into error” (140; c.f. ARNHEIM 1989/90).

This means incidentally that no real separation can be drawn between basic causal understanding of perception, heuristics and models, and eventual hypothesis of brain function. Perhaps the best way to look at it would be levels of organizational power (Fig. 2), in perception itself (phenomenal), in the model of relational determination applied across phenomena (higher-order variables; at this point we would certainly be practicing Gestalt psychology), in a hypothetical instantiation of this according to basic mathematical or physical principles, and finally in concrete brain mechanisms.

Experimental Phenomenology	Gestalt Psychology	Mathematical Formalizations	Neurobiological Explanations
Appearances, Description, Percept-Percept Couplings	Principles of Unit Formation, Relational Determination, Field-like effects	Lie Algebra, Topology, Catastrophe theory, Fractals, Chaos Theory	Synergetics, Phase-transitions, Symmetry Breaking, Harmonic resonance, Synchronous Oscillations

Fig. 2 Levels of explanation in perception

Perhaps enough has been said to note some of the positive functions that experimental phenomenology can serve in the laboratory. These could include (1) describe a phenomenon in all its complexity, (2) exhaustively uncover perceptual dependencies (percept-percept couplings), (3) constrain neurophysiological models and (3) drawing similarities between phenomena (‘the influence of figural factors on color’ etc.). As to the first problem, BOZZI (1989) has written of the ability of phenomenological dem-

onstrations to rule out neurophysiological theories. Strange and compelling phenomena can restore our wonder in phenomena, humble our prideful researching and, more practically, immediately rule out certain standard theories (c.f., HATFIELD 2002).

An example here would be numerous illusions that falsify the contrast (or lateral inhibition) explanation of lightness by antagonistic cell function. Figures have been devised by AGOSTINI & GALMONTE (2002; **Fig. 3**) that actually show that when contrast should be maximal (a white patch against a dark background) the illusion goes exactly in the oppositely predicted direction! These demonstrations will not limit the kind of model building and reductionism that is rampant in psychology today, but they serve as tangible water marks that any adequate explanation must address.

Regarding the second problem, we can begin to understand various illusions and the principles underlying them and see that there are trends. The above illusion falls under the heading of illusions that show the influence of figural factors on color, and it would not take long to begin to see that this figural element is an artifact of organization, thereby strengthening the role of organization in perception. Of course, as I have suggested, this will immediately set us to thinking *how exactly such organization could come about*. But it need not, even though we would understand that something lay beneath these phenomena.

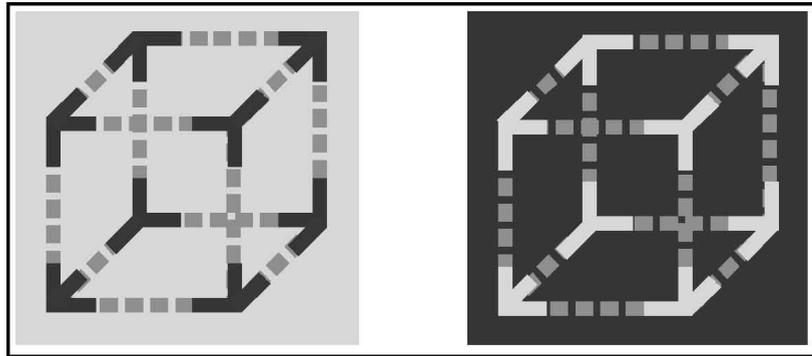


Fig. 3 The AGOSTINI-GALMONTE Necker Cube

To conclude, then, Experimental Phenomenology would become the basis of perceptual research and assume its place as the first and last step in explanation, the beginning of quizzical inquiry and the check that the explanation is adequate. It would be a reminder that the purpose of psychological research is not so much models, theories, papers and textbooks, but rather the phenomena that we live with, which are the *raison d'être* of research in the first place.

Experimental Phenomenology and Art

If Experimental Phenomenology is so successful at restressing our priorities in psychological research in the current reductivist and neuro-biological climate, a place where it is particularly useful lies in the study of art. It becomes a timely and succinct corrective of studies of art and provides a useful banner under which to reorganize research.

In the past few years, psychological study of art has drifted from the analysis of works of art using phenomenal-perceptual research, in the manner of Rudolf ARNHEIM, to the application of neural mechanisms to works of art. This was already evident in the research by Dorothea JAMESON and Leo HURVICH on color perception, where retinal mechanisms were used to explain the use of color in painting. The retina is a peripheral neural system, however, and the more recent trend is toward cerebral mechanisms.

Following the reductivism of the research of HUBEL and WIESEL in the nineteen sixties, scientists have taken to using laboratory findings to try to explain how and why works of art look the way they do. In light of the foregoing discussion we can see immediately that we are not dealing with the "psychology of art" at all but rather with the "biology of art" (LIVINGSTONE 2002) or a "neuroaesthetics" (ZEKI 1999). True to an increasing positivism in especially Anglo-American science, however, these studies are taken to be the most rigorous to the point that it is hard to imagine what exactly a "psychology of art" might be any more, other than a psychoanalytic exercise.

As indicative of the recent trend we have the works of Margaret LIVINGSTONE (2002) and Semir ZEKI (1999; c.f., ROSE 2004). Both are practicing researchers intimately aware of the functioning of brain architecture. They come to art in an attempt to apply the latest findings of brain science to understanding the mysteries of art and its symbolic function.

An example is LIVINGSTONE's discussion of LEONARDO da VINCI's *Mona Lisa* (c. 1505, Louvre, Paris; **Fig. 4**). Using a novel application of retinal functioning, she shows how foveal and non-foveal contents account for the enigmatic smile of the sitter. Focusing on the eyes, she argues, one sees the mouth with the non-foveal part of the eye. Detail is poorer so the shadow of the cheekbones enhances the sense of a smile. When the rich detail detecting foveae is trained on the mouth, however, no smile is seen; hence its elusiveness.

It can be seen that the depth and profundity of this work of art hangs in the clustering of cells and their function in the retina. From the point of view of the epistemic priority of Experimental Phenomenology, however, this is extremely premature. In fact, the weight of this account might rest purely on ontological primacy, because brain mechanisms are closer to the transcendent real.

Before turning to the painting, it is worthwhile thinking of transductive complexes that surround it in the form of art historical speculation. *Mona Lisa's* smile was first mentioned by Giorgio VASARI in the sixteenth century (1550), making his writings an authoritative early source. This seemingly useful point of departure, however, is marred by our knowledge of the rhetorical function that the anecdote served VASARI's writing, as he provided biographical detail behind an artist he considered a founder of the modern style of painting.

Seen in this light, we can see that the *Mona Lisa* is more interesting for idealizing its subject, providing a convincing tonal unity to its presentation, partly through focused lights and darks (*chiaroscuro*) and blended contours (*sfumato*), and downplaying superficial detail in favor of psychological interiority (HALL 1992, 116-122).



Fig. 4, Leonardo da Vinci, *Mona Lisa*, c. 1505, Louvre, Paris

This was a veritable revolution for LEONARDO's peers, whose works to this point, especially portraiture, included status-indicating details and were rendered in harsh, outlined style with jarring tonal differences between colors.

This brief historical excursus prepares us for a more interesting psychological reading of the painting that looks at the painting qua painting, in all its descriptive and illusionistic subtlety. First, we would remark on the way that LEONARDO has generalized the background and figure, using his spotlighting technique of *chiaroscuro* on the figure's face and hands, the most expressive elements. Secondly, we would note the phenomenological quality imparted to the color through the use of *sfumato*. Of course, KANIZSA (1954/1979), following KATZ, did pioneering research on marginal contours and the ensuing differences in color appearance and we can see that LEONARDO's *sfumato* has a way of making the surface colors into more of film colors. Given that LEONARDO has downplayed strongly identifiable hues, this reduction of tonal difference together with *sfumato* create a work whose tone is strongly unified and therefore more seemingly naturalistic.

Tempered with some historical background, we could call this the beginnings of a Experimental Phenomenological analysis of the painting. I believe that such an account of this painting sketches a fuller idea than a reductivist account because it is more fundamental, closer to the actual experience. From here we could pass onto general perceptual rules that might lead us toward a deeper analysis of the picture. This would constitute the "psychology of art." And so it is with psychological explanation in general.

Gestalt theorizing has always had a delicate balancing act to maintain. The phenomenal has always been the starting point and arbiter of explanation while an attempt to direct investigation materialistically, toward physical processes has also always been a goal. The two are united, I argue, according to the difference between epistemic and ontological priority. By reaffirming the meaning of realism, we can see that both are indispensable for a true theory of perception. Toward this end, experimental phenomenology will always be essential.

Summary

For some time, brilliant research from the Gestalt-derived Italian school of experimental psychology has been calling itself 'Experimental Phenomenology.'

This has been a complex process of identity management, encompassing: (1) the restated belief in the Gestalt commitment to phenomenological analysis to accompany psychological analysis, (2) a distancing from KÖHLER's orthodox Berlin brain physiology, and (3) a sentimental rediscovery of the 'native' phenomenological tradition of Austro-Hungarian psychology (of which Trieste was a part and Vittorio BENUSSI the most important representative) in opposition to Berlin Gestalt psychology.

My paper deals with two issues: (1) is what goes under the name of Experimental Phenomenology in Italy actually that? and (2) is a phenomenological reform of Gestalt psychology necessary or advised?

As to the first question, I believe that part of Italian Experimental Phenomenology is not actually pure phenomenology but rather experimental science concerned with formulating principles of behavior. This raises the second question. If Experimental Phenomenology is not exactly that, how relevant is its theoretical framework?

Departing from defenses of Experimental Phenomenology, I will show how its aims are not too different from those of Berlin Gestalt psychology and that this leaves open the question of a complementary philosophical backing to Gestalt theory, which the defenders of experimental phenomenology seem to be really after.

Zusammenfassung

Seit einiger Zeit firmieren brillante Forschungsarbeiten der gestalttheoretisch orientierten italienischen Schule der experimentellen Psychologie unter der Bezeichnung „Experimentelle Phänomenologie“.

Dem liegt ein komplexer Prozess des Umgangs mit dem eigenen Selbstverständnis zugrunde, der drei wesentliche Elemente beinhaltet: (1) eine Reformulierung der gestalttheoretischen Überzeugung, daß jegliche psychologische Analyse von einer phänomenologischen Analyse begleitet sein muß, (2) eine Distanzierung von KÖHLERs ursprünglichen hirnpfysiologischen Auffassungen aus der Berliner Zeit und (3) eine Wiederentdeckung der „ursprünglichen“ phänomenologischen Tradition der österreichisch-ungarischen Psychologie (der auch Triest zugehört, mit Vittorio BENUSSI als wichtigstem Repräsentanten) im Gegensatz zur Berliner Gestaltpsychologie.

Die vorliegende Arbeit behandelt zwei Fragen: (1) Wird die Bezeichnung Experimentelle Phänomenologie dem, was heute in Italien darunter firmiert, tatsächlich gerecht? Und (2) ist eine phänomenologische Reform der Gestaltpsychologie notwendig und angeraten?

Zum ersten: Ich denke, daß die italienische Experimentelle Phänomenologie tatsächlich keine reine Phänomenologie darstellt, sondern eher eine experimentelle Wissenschaft, die sich mit der Formulierung von Gesetzen des Verhaltens beschäftigt. Daraus ergibt sich die zweite Frage: Wenn diese Experimentelle Phänomenologie ihrer Bezeichnung nicht wirklich gerecht wird, wie relevant ist ihr theoretisches Konzept?

Ausgehend von Argumenten, die für die Experimentelle Phänomenologie ins Treffen geführt werden, zeige ich in meinem Beitrag, daß sich ihre Ziele von denen der Berliner Schule eigentlich kaum unterscheiden. Es scheint den Verteidigern der Experimentellen Phänomenologie eher darum zu gehen, die Gestalttheorie ergänzend philosophisch zu untermauern.

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