From Rule Following to Productive Thinking: Reading the *Philosophical Investigations* in the Light of Gestalt Psychology

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Résumé: La relation de Ludwig Wittgenstein à la psychologie de la Gestalt est généralement comprise à travers le prisme de son travail sur l’œuvre de Wolfgang Köhler. Bien que précieux, ce cadre peut occuler certaines similitudes plus larges entre l’approche méthodologique de Wittgenstein et l’école de la Gestalt considérée dans son ensemble. Dans ce qui suit, je m’inscris dans cette ligne de pensée en comparant la discussion de Wittgenstein sur le respect des règles dans les *Investigations philosophiques* avec le concept de pensée productive de Max Wertheimer. Je soutiens que l’accent mis par Wertheimer sur les aspects partagés et publics des phénomènes de Gestalt contrecarre la tendance de Köhler à caractériser les Gestalts comme des entités essentiellement privées. Je suggère qu’à cet égard au moins, l’approche de Wertheimer est plus proche que celle de Köhler de l’orientation philosophique ultérieure de Wittgenstein.

Abstract: Ludwig Wittgenstein’s relation to Gestalt Psychology is typically understood through the lens of his engagement with Wolfgang Köhler’s work. Though valuable, this framing may obscure certain broader points of similarity between Wittgenstein’s methodological approach and the Gestalt school considered as a whole. In what follows I pursue this line of thought by comparing Wittgenstein’s discussion of rule-following in the *Philosophical Investigations* with Max Wertheimer’s concept of productive thinking. I argue that Wertheimer’s emphasis on the shared and public aspects of Gestalt phenomena counteracts Köhler’s tendency to characterise Gestalts as essentially private entities. I suggest that in this respect at least, Wertheimer’s approach is closer than Köhler’s to Wittgenstein’s later philosophical orientation.

It is possible to manipulate numerals mechanically, just as it is possible to speak like a parrot; but that can scarcely be called thinking. It only becomes possible after mathematical symbolism has been so developed, through genuine thinking, that it does the thinking for us, so to speak.

[Frege 1950, IV]

1 Introduction: Wittgenstein and Gestalt psychology

Work on Ludwig Wittgenstein’s relation to Gestalt psychology tends to focus on Wittgenstein’s relation to Wolfgang Köhler, and especially to their respective discussions of aspect-perception. This is a natural route to take when approaching the material. After all, Wittgenstein’s discussion in Part II of the Philosophical Investigations (PI) [Wittgenstein 1953] centres around an extended discussion of philosophical issues around the perception of aspects, and it is clearly influenced by his close reading of Köhler’s Gestalt Psychology (GP) [Köhler 1947].

Moreover, the Gestalt psychologists are now known chiefly for their work in visual perception. The attention which they paid to the complex ways in which visual experience is structured and “unconsciously interpreted” may seem to be the most valuable part of their legacy; certainly, it has provided a rich seam of material for both philosophers and psychologists alike.

Yet, key here is the word “legacy”, for Gestalt psychology is by and large a historical phenomenon. Consulting a psychology textbook, one is likely to learn that Gestalt psychology was important in supplanting the structuralism of Wilhelm Wundt and his followers, and that the school bequeathed to psychological research an interest in the mechanisms of visual perception, but that its methods were surpassed after the cognitive revolution in psychology.

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1. For a helpful overview of the historical data available concerning Wittgenstein’s reading of Köhler, see [Dinishak 2014]. Wittgenstein likely read Köhler’s Gestalt Psychology in its original 1929 publication, which was reissued in revised form in 1947 as Gestalt Psychology: An introduction to new concepts in modern psychology [see Köhler 1947]. References in what follows are to the 1947 edition.

2. For discussion of issues surrounding this paper I would like to thank the participants of the Wittgenstein and Expression online seminar of 2021, and the UEA Wittgenstein seminar of March 2022. Special thanks go to Dav Devalle, Lars Hertzberg, Phil Hutchinson, Lynette Reid, and Michael O’Sullivan.
showed that more progress could be made by representing the mind on the model of a computer program.

However, this story is incomplete as a representation of both the historical achievements of the Gestalt approach, and its contemporary significance. Although best known for their work on perception, the Gestalt school’s interest in the mechanisms of perceptual organization formed only one part of their overarching account of language and cognition, itself developed as part of a theory of learning, education, and even aesthetic appreciation. The Gestalt school aimed for no less than a comprehensive account of the principles which structure human subjectivity in its variety of forms. Whatever one thinks of such lofty ambitions, it is surely unduly narrow to suppose that the Gestalt psychologists had no interesting insights outside of their work in visual perception.

Moreover, the Gestalt school did not only target the structuralist school of psychology but also fiercely criticized rival contemporary approaches to psychological investigation as well, such as William James’ introspectionism and the behaviourism of B. F. Skinner. During the 1920s and 1930s, psychology was riven by debates between practitioners who asserted the primacy of subjective experience to the field of psychology and those who argued that the unobservability of such experience rendered it unfit to be a central concept in any empirical science. The Gestalt school offered a way to move past this controversy.\(^3\) They argued that the artificiality of the laboratory settings which these rival approaches used hampered their results, by requiring the adoption of reductive conceptions of the data of psychological study (on the one hand, observation reports from trained subjects, on the other, stimulus-response pairs). For the Gestalt psychologists, psychology had to concern itself with the phenomena of actual human life; accordingly, experimental methods had to be designed in such a way as to make such phenomena observable and measurable, without introducing artificial distortion. This pragmatic and pluralist orientation both helped psychology move beyond the laboratory and alerted psychologists to the difficulties in generalizing from results obtained in laboratory settings to conclusions which hold in ordinary life.

Lastly, Gestalt psychology inspired a distinctive form of therapeutic practice (“Gestalt therapy”, founded by Fritz Perls, Laura Perls and Paul Goodman) which repurposed the central concepts of Gestalt psychology into a humanistic form of person-centered therapy, focusing on helping people achieve greater self-understanding through a better awareness of unconscious processes of self/environment regulation [Perls, Hefferline, & Goodman 1951]. Insofar as Gestalt therapy remains relevant to contemporary therapeutic practice, the Gestalt school’s relevance must, to some degree, persist as well.

Though the most well-known, Wolfgang Köhler (1887-1967) was not the only Gestalt psychologist. His colleagues Kurt Koffka (1886-1941) and Max Wertheimer (1880-1943) were both important figures in the foundation and

\(^3\) See the introduction by Pratt in [Köhler 1969].
development of the Gestalt school. The work of these three thinkers was deeply collaborative, and along with their experimental research, each wrote books developing a unified theoretical and philosophical underpinning for their psychological approach. They frequently referred to each other’s work. Accordingly, a satisfactory account of Gestalt psychology will consider the work of at least these three thinkers (not to mention other figures such as Christian von Ehrenfels and Abraham and Edith Luchins). That goes equally for philosophical engagements with Gestalt psychology (my concern), which would benefit from a wider view of the school. This wider focus will help not only with understanding Gestalt psychology in its own right, but also in placing Wittgenstein’s work in relation to it. Although of course the Wittgenstein/Köhler interchange can profitably be made the centrepiece of any discussion of Wittgenstein’s relation to Gestalt psychology, we risk missing some of the parallels between Wittgenstein’s work and concepts in Gestalt psychology if we allow it to be the sole focus.

This article is a first step towards a broader reading of this kind. I will introduce the work of Wertheimer, focusing on his *Productive Thinking (PT)* [Wertheimer 1945]. I do not know whether Wittgenstein read Wertheimer. I assume not; yet it is hard to read Köhler and not at least be aware of the existence of Wertheimer’s work, since Köhler often refers to him. *PT* is a charming book, and I think that Wittgenstein would have really liked it. Indeed, as I hope to show, Wertheimer is intellectually closer to Wittgenstein than Köhler is, since Wertheimer is especially concerned with questions around the nature of thinking and logic, and since he approaches these questions through detailed consideration of educational practice.

2 From rule following to productive thinking

The competition amongst psychological theories in the 20th century was not only conducted over the question of which model can best help in the understanding of human (and sometimes animal) behaviour, but also over practical possibilities for its treatment or improvement. Given the controversies over what was to count as relevant data for psychological research, as well as the social and political context of the time (which was characterized by sweeping change and a sense of looming crisis), these practical tests were of outsize importance. Lacking agreement on the basic data, psychologists argued instead for the superiority of their approach by attempting to demonstrate that their theory alone could help solve some or other problem besetting humanity. Therapeutic treatment of psychological conditions was of course one such touchstone. Another was educational practice. Thus, B. F. Skinner, in his *Science and Human Behaviour* [Skinner 1953], promised that a “science of behaviour” would help to show how teaching
could be made more effective, and, as a result, how we could solve problems which have their route in ignorance stemming from poor educational practices [Skinner 1953]. (He even gave us a fictional representation of what a society would look like organized on behaviourist principles, in his novel *Walden Two* [Skinner 1948].) Skinner was not alone in this utopianism. Members of the Gestalt school were united in their belief that the importance of Gestalt psychology was not limited to a better description of (say) how we perceive words in lines of printed text, but rather was a matter of giving us the tools that we need to improve our individual and collective self-understanding, through a more accurate account of ways in which human beings are situated in, and interact with, their environment.

If we start by conceiving of Gestalt theory as an account of education, then an interesting parallel between Gestalt psychology and Wittgenstein’s later philosophy becomes apparent. Thus, whereas the *TLP* has no discussion of education whatsoever, the *PI* opens with a quotation from Augustine concerning how a child learns to speak. With this opening Wittgenstein seems to declare that in investigating questions of the nature of language, thought and logic, we must take care to attend to the unfolding of these phenomena within human lives. As the various references to children and pupils in the *PI* attest, these uses include what Stanley Cavell calls “scenes of instruction”—in other words, teaching and learning [Cavell 1979, 125].

If a central concern of the *PI* is to explain what it is to learn language, then for the author of that book it seems that this question should not be separated from the question of how language is learned. Indeed, it can be argued that one of the *PI*’s most significant achievements is to demonstrate that knowledge is rendered mysterious if represented in terms which invite us to think of that which is known as an item, the nature of which is only accidentally connected to the method of coming to acquire it.

To take an example of Wittgenstein’s, suppose that I am asked to complete the sequence “1000, 1002, 1004...” After hardly any time at all I realize that the correct answer is 1006\(^4\). When I come to see what is required of me, I grasp something: now I know how to do what my teacher wants; how to complete the sequence; and—if we imagine this performance as part of an elementary mathematics lesson—how to employ the function “add 2”. I may even thus have learned the concept of addition. What happens in this moment, at the point where understanding dawns, where I may exclaim, or think to myself, “now I know how to go on!”? Here we have the grasp of a rule; I see, and so come to share, what my teacher had in mind. This item which is held in mind we might call a “thought”. Such things are countable (one thought, two thoughts, etc.), shareable (you may think what I am thinking) and portable (I can think the same thing on different occasions).

These perfectly natural reflections can lead us down a treacherous path, however, insofar as they invite us to think that grasping a rule means acquiring

\[^{4}\] *PI* §§186 *ff*. I have adapted the example very slightly.
a thought, which stands only in an instrumental relation to the method by which we come to acquire it—as if we could imagine someone gaining the same understanding from a punch to the head. Wittgenstein challenges the idea that an account of knowledge in these terms could be fully satisfactory, taking issue with the idea of knowledge as an “inner state”, if this involves leaning uncritically on notions of “inwardness” and of a “state” (or “process”) \([PI \, \S\, 308]\). Rather, he repeatedly draws our attention back to contexts of use—urging us to attend, not only to knowledge as it is used, but also to the multifarious ways in which the term “knowledge” is used \([PI \, \S\, 116]\).

The rule following passages are concerned with the question of how we can grasp “in a flash” the use of an expression, when that is something which extends into the future. This transposes into a question about the relation between the finite and the infinite, or the general and the particular; how can this performance be an instantiation of an abstract item (a rule) which is by its nature general and so ranges over an infinite number of cases? Any set of finite behaviour can be taken to instantiate any of an infinite number of different rules, and once the question has been raised in these terms, then no further reference to finite behaviour, will, it seems, be sufficient to close the gap thus opened. And this transposes once again into a question concerning the possibility of our being under this kind of indefinite but determinate constraint; following the rule “add 2” requires that I act in a certain way, but the requirement stretches only indefinitely into my future—since at a certain point I can stop the procedure without therefore violating the rule. Here we have a classic interface problem, of the kind that perennially haunts philosophy.

The reflections of \([PI \, \S\S\, 138–242]\) show us that a certain conception of understanding in terms of interpretation is destined to leave meaning mysterious. At heart here is an argument against seeing meaning in terms which would bypass reference to the individual, and so relegate as of secondary importance the question of what a person means by the words she uses on a given occasion. Any account of meaning which represents it as only a relation that holds between a particular item (a string of sounds or printed letters, a physical state of an organism, or what have you) and an abstract item (a proposition, &c.) will be open to skeptical reduction.

Of course, much turns then on the details of the picture with which Wittgenstein replaces this misguided account of meaning—whether, for instance, we read him as holding that signs when seen as parts of a practice can, in Frege’s expression, “do the thinking for us”, or whether meaning something is not the business of signs themselves, but rather only something which we do with them [see McGinn 2022, chap. 9–10]. Here is not the place to get into this issue, but I will make a few observations.

First, although it is important to rehabilitate the notion of determinacy—that the command “complete this sequence” may be, in a given context, such that there is only one response which constitutes successful obedience to it—we
should note that it is equally important that there is a degree of indeterminacy in our language use. Progress in problem solving often comes from a person following a command (or answering a question) in a surprising way, when this reveals a certain openness in the request, rather than a misunderstanding on the part of the hearer. So-called Travis cases [see Travis 2006] (e.g., I asked you to bring me a green leaf and you brought me a leaf painted green) are not just embarrassments for a certain picture of how truth can be made to turn on a determinate way that things are—they also point to the fact that the indeterminacy in our language use, the possible slips between order and execution, are not kinks to be worked out of natural language but are rather a characteristic feature of productive thinking.

Second, in being able to complete a sequence such as 1000, 1002, 1004... a pupil does not yet display an ability to add, or a knowledge of addition, or of the natural numbers. This practical ability might only be a case of mere parroting and is not yet evidence of genuine thought. In writing “1006” a pupil may have obeyed the teacher’s instruction; pleased the teacher; and completed the sequence correctly. Yet, all these things may have been intended or not by the pupil without the question even arising as to whether the drill related in any way to the concept of addition. Furthermore, even if the pupil intended to display her grasp of that concept through the completion of the sequence, the grasp therefore displayed is only slight, and not particularly impressive.

Finally, supposing that the order to complete the sequence comes as part of a scene of instruction, then it may be taken to be a part of a transition to knowledge. In that case what the pupil has attained is something which can be tested, not only by repeating the same drill but also by trying different, unfamiliar exercises. These tests will display the shape of the pupil’s comprehension—they will show, as it were, how far her understanding of addition stretches. And—crucially—these tests will not only reveal the pupil’s knowledge, nor simply reveal and reinforce it, but may deepen it as well.

How should we understand these notions? What picture of thinking do they suggest? To answer these questions, I turn to Wertheimer. Like Wittgenstein, Wertheimer was fascinated by the moment of understanding, that point when a pupil suddenly knows “how to go on”, the moment of joy and surprise when the solution to a problem becomes clear. We could naturally call this a moment of insight [Einsicht]. For Wertheimer the concept of insight is important and is connected to the idea of (perception of) unity [Einheit]. Where Wertheimer’s discussion improves on the PI rule-following discussion is that Wertheimer emphasises that in coming to understand a problem the unity which is made manifest to the pupil need not be confined to the unity

5. Though Wittgenstein himself does not use the term “insight” to describe the grasp of a rule. Einsicht appears only twice in the PI: at §186 where it is quoted while criticising the idea that an intuition is required at every step of following a rule; and (intriguingly) at §109, where Wittgenstein describes the feeling that one needs, through philosophy, to gain an “insight” into the workings of language.
between the order and its execution (between the rule and its instances) but is broader than this; it is a matter of seeing the structural features of the problem which give it its location within the context, which Wertheimer calls the “total field”.

We might say that Wertheimer’s *PT* is a text in the psychology of education. However, we might equally say that it is a contribution to the understanding of thinking. His key question is: what makes for genuine thought? How, in other words, can we represent genuine thinking, as opposed the mere mechanical processes of responding by rote or according to drill? Accordingly, he opens his book with a discussion of two traditional answers to this question, the representations of thought in empiricist (i.e., associationist) terms, and in terms of “formal logic” (he has in mind here Aristotelian logic of syllogisms, classes, subject-predicate analysis and so on). After describing these two traditions, Wertheimer then gives a series of examples of teaching and learning, narrated at length, which show that the dynamics of actual processes of learning are not adequately captured in the concepts of either associationist psychology (such as habit, recall, conditioning, and trial and error) or traditional logic. Rather, he suggests, we ought to see these aspects of our thought from within the vantage point of Gestalt psychology, according to which thinking involves the transition from a state of lesser to a state of greater understanding, via a better perception of the essential (rather than the inessential) internal structural demands of the problem-situation under consideration. Or, to put it more precisely:

Thinking consists in envisaging, realizing structural features and structural requirements; proceeding in accordance with, and determined by, these requirements; thereby changing the situation in the direction of structural improvements, which involves:

- that gaps, trouble-regions, disturbances, superficialities, etc., be viewed and dealt with structurally;
- that inner structural relations—fitting or not fitting—be sought among such disturbances and the given situation as a whole and among its various parts;
- that there be operations of structural grouping and segregation, of centering, etc.
- that operations be viewed and treated in their structural place, role, dynamic meaning, including realization of the changes which this involves;
- realizing structural transposability, structural hierarchy, and separating structurally peripheral from fundamental features—a special case of grouping; looking for structural rather than piecemeal truth.

In human terms there is at bottom the desire, the craving to face the true issue, the structural core, the radix of the situation; to go
on from an unclear, inadequate relation to a clear, transparent, direct confrontation—straight from the heart of the thinker to the heart of his object, of his problem. All the items hold also for real attitudes and for action, just as they do for thinking processes. And thinking processes of this type themselves involve real attitudes. \[PT, 235–236; I have added the bullet points but otherwise kept the original formatting\]

The examples that Wertheimer uses to support this claim begin with apparently simple cases of teaching children geometrical and arithmetical sequences, and then proceed into both abstruse intellectual matters such as Einstein’s theory of relativity and everyday practical problems with titles such as “A Girl Describes Her Office” and “Two Boys Play Badminton”.

I will resist the temptation to spend my time simply going through his examples in detail, even though I want to. The book is a ride, and I find it remarkable how he seamlessly builds from simple geometry lessons to practical problems concerning how to represent social situations. I also find Wertheimer’s discussion to be often funny, since he does not only set problems and give solutions, but also describes the reactions of the children and adults to whom he gave these tests. I take this framing device to be crucial to the point he wants to make. First, it enables him to show that an important element of genuine thinking is its connection with feelings; confrontation with novel or puzzling cases naturally provokes reactions such as dismay and outrage, and relatedly there is a feeling of joy that comes from suddenly seeing the answer to such a problem—to achieving a “more penetrating perspective” \[PT, 169\], or discovering a “clear, surveyable order” \[PT, 188\].\[6\]

Second, by presenting himself presenting problems to students, he can show that part of what is important in learning is the process of learning, which is not only a matter of trial and error on the part of a pupil, but rather involves instead a dynamic interaction between pupil and teacher, who are both focused on the same problem. Simple arithmetical cases can lull us into thinking that all a teacher does is to bring the student to understand something which she herself already perfectly understands and has in mind. Though this is sometimes the case, often in teaching the teacher is also developing her own understanding of the subject-matter. In finding new ways to bring students to comprehension, in answering students’ (sometimes naïve or strange) questions, in finding fresh ways to present the material, and so forth, the teacher’s own relation to the material will develop. This development may be in the direction of an increased depth, or it may be the opposite, the “deadening” of the subject to the teacher, its coming to feel rote.

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6. Compare Wittgenstein’s notion of a “perspicuous representation” \[über-sichtliche Darstellung\] \[PI § 122\].

7. I note here an important parallel between Wertheimer’s work and Spinoza’s. The Gestalt psychologists’ account of “insight learning” may fruitfully be compared to Spinoza’s “third kind of knowledge”.

Running alongside this changing relationship with the subject itself, the practice of teaching discloses something about the possibilities of learning inherent in human life. In teaching, the teacher learns something more about human nature, about the nature of productive thinking. This is part of what we may learn from them. We can better perceive both the unity and the diversity in the shape of thinking and learning in the lives of human beings, the different ways in which human beings take on and take forward ideas which they are given. On an existential level we can also come to understand how it can be possible to combine the apparently conflicting values of discipline and repetition (which are necessary for mastery) on the one hand, and excitement and novelty (necessary for originality) on the other.

For Wertheimer, thinking is thus a distinctive kind of process, one which involves not only reaching a solution to a given problem, but also better understanding both the problem itself and the context in which the problem is embedded, and which is undertaken not by a lone individual but through a dynamic activity of renegotiation; thought develops through the joint attention which can be brought to bear on a problem by more than one individual, each of whom comes to the issue with his or her own perspective and form of comprehension. Concern for truth must be situated within the broader aspiration for an improvement in understanding, and to reduce the latter to the former would be to assume that the more facts one knows, the more one understands. (Thus, the fundamental defect with formal logic which he sees is its “disregard of the intense directedness of live thought processes as they improve a given situation” (259).) Sometimes improving one’s understanding involves seeing a problem as a particular instance of a more general difficulty, other times it means seeing that the problem was not what one first took it to be. Sometimes, progress is made through the discovery of transpositions and generalizations—for instance, seeing that a particular problem (finding the area of a given parallelogram) is one instance of a more general problem (finding the area of any given parallelogram). Other times, progress is made through seeing internal structural patterns which were not apparent in the way the problem was first presented. And so on.

In all of these cases, Wertheimer suggests that what is happening can be understood as a switch in Gestalt; the progress towards better insight into the problem in question is achieved through changing the orientation of the problem, i.e., representing the inner structural features of the situation under consideration in such a way that the problem is either solved, transformed, or shown to be insoluble. The key to progress is to see how the laws which govern thinking—such as the laws of Prägnanz (very roughly: that the mind prefers the easiest possible solution to a problem) and constancy (that if a method is successful, we tend to repeat it)—can be observed and critiqued, so that we can see when one’s natural tendency to approach a problem in a certain way is helping in reaching a solution, and when it is interfering with it.

Consider Wertheimer’s case, “A Girl Describes her Office” [PT, 181–192]. The goal of this example is to show how “centering—the way one views the
parts, the items in a situation, their meaning and role as determined in regard to a center, a core, or radix—is a most powerful factor in thinking” (181). The situation is as follows:

I was visiting a family. The daughter of the house came home and was introduced to me. Her father asked how she had spent the day. She answered that there had been a good deal of work, but that she was fine. I asked, “Are you working?” “Yes”, she answered, “I am working with a firm”. “Is it a big place?” “Well”, she said, “there are a number of people in the office. I have to do directly with a Mr. A, a Mr. B, and a Mr. C, who often come to my desk, ask questions, bring me letters, etc. There are others in the office with whom I do not have to do directly. Mr. A has dealings with a Mr. D, Mr. B with a Mr. E, and Mr. C with a Mr. F. D and E also have dealings with each other; so do E and F. Let me see, that makes six people in the office besides myself”.

I asked, “Are you the boss?” “Oh no”, she answered. “Do you give orders to anyone?” “Oh yes, I sometimes give orders to Mr. A and to Mr. C. I get orders from Mr. B; Mr. D gets them from Mr. E, Mr. E from Mr. B, and Mr. F from Mr. E.” (She was apparently logically minded, and was trying to tell the whole story.) I was somewhat disturbed—I guess the reader is too—and I said: “I am still in the dark about the people in your office”. “Oh, but I have told you everything”, she answered. Nevertheless, I was in the dark. Suddenly I said—it was a hunch—“So Mr. B is your boss, and you are directly below him, and so is Mr. E?” “Yes”, she said. (181–182)

As Wertheimer says, the subject here has stated all of the relations of the office correctly and completely, but the form of presentation does not make the structure of the office clear. The problem is that the representation which she gave centres herself in the picture. Proceeding through a series of steps, Wertheimer shows how her description can be represented visually [Figure 1].

![Figure 1: Wertheimer 1945, 183](image)
This is then transposed into the following diagram, representing the links between the members of the office [Figure 2].

![Figure 2: Wertheimer 1945, 185](image)

By contrast, consider a representation of the office which makes it clear that the subject’s position in the office hierarchy is not central [Figure 3].

![Figure 3: Wertheimer 1945, 185](image)

This representation can then be transposed into a visualisation of the office relations [Figures 4 & 5].

![Figure 4: Wertheimer 1945, 186](image)

This representation both encodes a clearer conception of the office’s structure, and involves a diagrammatical representation which is pleasing—
whereas Figure 2 feels distorted, or missing a line between D and F, Figure 4 gives an impression of completion, of an intelligible and natural structure. In the move from Figure 2 to Figure 4 we have effected a switch in Gestalt; borrowing Wittgenstein’s formulation, the information presented is recognised as the same and yet at the same time as completely transformed.

This is of course only a very brief outline of the case itself, and Wertheimer’s own discussion is more detailed, and more careful. It nevertheless brings out certain salient features of Wertheimer’s methodology. Most importantly, a clear representation of a problem can sometimes require a transposition of a description into a form of representation in which an inner structural relatedness of the parts becomes apparent. Sometimes a representation in these terms is in itself sufficient for solving a problem of understanding—other times it will of course only be a step towards a solution to the difficulty at hand.

This case also brings out the ethical implications of Wertheimer’s view. He remarks about this example that such cases show that, contrary to the assumption of egoism, it is not natural for individuals always to view themselves as the centre of a situation, and doing so often interferes with understanding. The work of improving the understanding often involves decentering the self, trying to find a representation of a situation which centres in accordance with the “structural objective requirements” of the problem at hand. As he says, “real thinkers forget about themselves in thinking” (180). And also:

In many instances it is the structural nature of the objective situation which essentially determines the vectors and the steps, while the I, the ego, and his personal interests and tendencies play only a small role, or none at all. (241)

At the same time, this process of decentering does not come easily; it involves the achievement of a certain attitude\(^8\) on the part of the thinker:

When a picture is given here of the inner structural dynamics in the determination of processes, it does not mean that in this development man is merely passive. An attitude is implied on his part, a willingness to face problems straight, a readiness to follow them up courageously and sincerely, a desire for improvement, in contrast with arbitrary, wilful, or slavish attitudes. This, I think, is one of the great attributes that constitute the dignity of man. (243)

Unless it be thought that this picture is overly austere and self-denying, Wertheimer also considers instances where de-centering does not mean denying

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\(^8\) I only have Wertheimer’s text in English, so I do not know what word he uses for attitude here, but I hope it is *Einstellung*, a central term in Gestalt psychology [see Gibson 1941]. Note that *Einstellung* also plays a key role Wittgenstein’s discussion of other minds at \([P1 II § 22]\), [see Winch 1987, chap. 10, for discussion].
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oneself, but rather setting aside one’s immediate desires in service of the satisfaction of one’s “deeper needs”, needs which might not have been apparent when the problem first arose (and ignorance of which may indeed have been the cause of the problem). In “Two Boys Playing Badminton” he narrates a case of two boys who are unevenly matched in skill who face a problem—their game is no longer fun as the older boy (A) constantly beats the younger boy (B). In figuring out how to get B to keep playing with him, A learns to move from a competitive to a cooperative style of playing. In so doing he comes to see different possibilities in the situation, and comes to understand better the equilibrium which such games depend on:

The “against,” the “trying to beat him,” that functions properly in the good game had grown into an ugly feature which no longer fitted the game situation. (178)

As Wertheimer remarks, the solution to this problem “was not just a technical affair for this boy” (176). Moreover:

The feature of straightness, honesty, sincerity, does not seem peripheral in such a process. Generally speaking it is an artificial and narrow view which conceives of thinking as only an intellectual operation, and separates it entirely from question, of human attitude, feeling, and emotion—“because such topics belong to other chapters of psychology”. This is especially clear in one example, in the transition from a blind egocentric view with its emotional ingredients to the later steps. But even seemingly mere intellectual processes involve a human attitude—that kind of willingness to face issues, to deal with them frankly, honestly, and sincerely. Although I have referred to this fact only briefly in other chapters, it seems essential in many cases of productive thinking, including our problems in pure elementary geometry. (179)

Following a desire for greater understanding is thus a natural and liberatory human tendency. And it is a pursuit which may be hampered by social and political forces:

Strong forces are at work in centering, in envisaging—or in trying to envisage—the true center according to the nature of a situation; but they are equally strong in cases of blind, enforced or willful miscentering, so efficiently used in some kinds of political propaganda. Although there are many strong forces working against true centering, there is nevertheless in human beings a clear desire not to be structurally blind, a desire to center properly, to do justice to the situation, to center in accordance with the nature of the object, of the structural objective requirements. (181)
The idea that in thinking there is an imperative to do justice to the situation, and that this requires a certain character on the part of the thinker is an idea which finds forceful expression in Wittgenstein’s work as well. I have in mind here his claim that “one pays for thoughts with courage” [Wittgenstein 1980, 52e] and his stated aspiration to be “no more than a mirror in which the reader can see his own thinking with all its deformities, so that, helped in this way, he can put it right” [Wittgenstein 1980, 18e]

3 Wittgenstein and phenomenology

Having suggested some parallels between Wertheimer’s work and Wittgenstein’s, I will now consider how Wertheimer’s work relates to Köhler’s, and what this may teach us about Wittgenstein’s relation to Gestalt psychology as a whole. Köhler lived significantly longer than Wertheimer and Koffka, and the extra years and fame he received afforded him the opportunity to put forward a more explicitly philosophical framework for Gestalt theory. As a result, Köhler’s account of Gestalt psychology brings with it philosophical presuppositions which are not present (or not obviously so) in the more practically oriented work of his fellows.

Köhler’s philosophical views include a psychophysical identity theory according to which Gestalt properties can be traced back to patterns of neuronal activation, alongside a commitment to phenomenology. I will focus on the latter, though I will also suggest that they are not unconnected. *GP* opens with Köhler painting a picture of a juxtaposition between two worlds, the “naïve” world of everyday experience, and the world “behind” that one, which science describes. Psychology he says, must begin with a faithful description of a person’s “naïve picture of the world”:

In my case, which may be taken as representative of many others, [my] naïve picture [of the world] consists, at this moment, of a blue lake with dark forests around it [...] a faint noise of the wind [...] my hand and fingers as they lightly move across the paper [...] a feeling of health and vigor [...]. Most people live permanently in a world such as this, which is for them *the* world, and hardly ever find serious problems in its fundamental properties. [...] There are problems, of course, even for the most uncritical citizens of this first-hand world. But, for the most part, they do not refer to its nature as such; rather, they are of a practical or an emotional sort, and merely mean that, this world being taken for granted, we do not know how to behave in the part of it which we face as our present situation. [*GP* 3–4]

People thus live in an easily intelligible and consistent world. There is however an element of fantasy in this life, for the consistency of this
world is only vouchsafed by its relation to the hidden realm of scientific law. The scientifically minded amongst us will discover that in fact our ordinary descriptions of the world are deeply flawed:

Though hundreds of millions still remain undisturbed, the scientist now finds it full of almost contradictory properties. Fortunately, he has been able to discover behind it another world, the properties of which, quite different from those of the world of naïve people, do not seem to be contradictory at all. [GP 5]

Such people attain a clearer view of the world around them, in understanding that our everyday world is not as it appears to be, and in formulating theories which reveal the inner structures and properties that determine the world around us. Köhler’s picture is thus of a three-fold movement: at the naïve level there is an apparently consistent mundane world, which in turn gives way to a scientific perception of the world as riven with (near-)contradiction, a world which is then rescued for us by the discovery of a world behind that of appearance, a world of quite different properties which returns consistency to the realm of first-hand experience.

At the time, this kind of sentiment was a familiar intellectual affectation and would not have seemed out of place as an introduction to a course on philosophy or psychology. But it sets Köhler on a dangerous path, for in speaking of a person’s naïve picture of the world, he does not pause to acknowledge that the idea of a “picture of the world” is itself only a picture. What, after all, does Köhler mean to include in this world? His list makes it plain that it involves ourselves, the physical objects around us, our sensations, our memories, and whatever else these things might presuppose. (So, it will presumably also include the past, or at least parts of it, and various possibilities, including counterfactual possibilities, things that could have been had things happened differently.) Köhler closes his list, but with the implication that what he has given us is only a sample of what a full inventory of the “first-hand world” would include, implicitly deferring a complete inventory for another time.

This is not mere coyness but evasiveness on Köhler’s part, and unjustified, because we need to know what the “first-hand world” is to include if we are to know what sense we can make of the idea of science as disclosing a world “behind” it, rather than, say, simply disclosing another part of it. If “the world” means everything, then to say that there is yet another world behind it is to make a religious proclamation rather than simply to reel off a straightforward fact about the domain of natural science. One might say that he has only really succeeded in giving us a gesture, the verbal equivalent of the sweep of a hand.

Already at this point we’ve taken a step which Wittgenstein in his later work deliberately refrains from taking. The contrast between Köhler’s approach and Wittgenstein’s is shown, inter alia, in the reluctance of
Wittgenstein in his later work to appeal to the word “world”. This reluctance of course marks out a significant contrast between Wittgenstein’s approach in his earlier and later phases. The *TLP* opens with the declaration that “the world is everything that is the case”, and later appeals to the concept of my world (now given a possessive pronoun rather than a definite article) in order to explicate ideas such as the limits of language, the nature of death and what it means to be happy. By contrast, in the *PI* the concept of the world is conspicuous by its absence; it appears (by my count) only in eight remarks in the first part, and only once in part two, and in almost all of its appearances the concept is invoked as part of a view to be criticised. This is not mere coyness on Wittgenstein’s part. As he puts it:

> We are under the illusion that what is peculiar, profound and essential to us in our investigation resides in its trying to grasp the incomparable essence of language. That is, the order existing between the concepts of proposition, word, inference, truth, experience, and so forth. This order is a super-order between—so to speak—super-concepts. Whereas, in fact, if the words “language”, “experience”, “world” have a use, it must be as humble a one as that of the words “table”, “lamp”, “door”.

[PI §97]

The thrust of this remark is that we must take care to appreciate that if our words get their meaning through the contribution that they make in our lives with language (our statements, commands, questions, and so forth) then this must apply equally to all words, which exist to serve our needs; there is no privileged category of terms, set apart from the rest of language, which can be used to express thoughts that depend in no way on the context in which they occur.

Using a term such as the “first-hand world” in the way that Köhler does, tempts us into thinking that we have made a real contribution to self-understanding in claiming that there is a world apart from (or behind) our representation of it. In using the concept of the world in this way we are assuming a capacity to generalise, as if the expression “things given to us in experience” fixed, without further ado, a concept with a determinate extension. But what justifies our thinking that all the different things which are going into the “first-hand world” could even form the kind of unity that would allow us to speak of them as contradictory or coherent? It feels a bit like saying “there is the domain of labour, which includes tools, their uses, the things they are used on and the things that they are used to make”—and then adding, “and we perceive no contradiction between these things”. To which we might justly reply, “who says?” Such a reply will always be on the table so long as we haven’t yet shown what “contradiction” can mean in such a context. How can a tool contradict its use?9

9. Compare here the analogous difficulty in [*PI* §427] “We have this vivid picture, and that use, apparently contradicting the picture, which expresses the psychical.”
This criticism applies equally, I suspect, to appeal to notions such as the “phenomenal world”—a world defined as all and only the things which are given in experience. I take the existence of such a world to be the starting point of phenomenology. Yet, what do we want to say is “given in experience”? Consider this exchange of Wittgenstein’s:

“I know how the colour green looks to me”—surely that makes sense!—Certainly; what use of the sentence are you thinking of?

Imagine someone saying, “But I know how tall I am!” and laying his hand on top of his head to indicate it! [PI §§ 278–279]

This joke works because the person who says this (“Jack” to you and me) is not simply being absurd. He does not say “I know how tall I am” and then flail his arms wildly. What Jack does in holding his hand to his head is to demonstrate knowledge of one part of a method for establishing one’s height. He may not know his height, but he knows how to know it. And mightn’t this sometimes be good enough? In a suitable context, there needn’t be anything trivial in this performance—for instance, if he straightened up to make his posture correct, made sure he was on a level surface and not standing on his toes, and then placed his hand on his head.

The gesture is what it is because we recognise it as the kind of thing which can function as part of an information-yielding activity. We imagine it as facetious insofar as we picture it in a context where the person was expecting an answer of a different kind—say, a description of height in feet and inches—and where the gesture is not useful but simply a statement of the obvious. The interchange as a whole works as a joke not simply because of the surprisingness of the answer, but rather because of the ambiguity in what the answer shows us—if it is not in itself informative, it is not in itself uninformative either. That ambiguity relates not to the performance itself, but to the context in which we were unconsciously placing Jack and his interlocutor. Our sense of surprise at Jack’s response reveals to us our own expectations, the ways in which, often without being aware of it, we imagine context which give a familiar shape to activities such as reporting one’s height. The joke engages us by disrupting those expectations—placing them in abeyance, inviting us to hold Jack’s gesture in a liminal space between silliness and sincerity.

We might wonder whether knowledge of his height is part of Jack’s phenomenal world. It is not, we might say, because it is not immediately accessible to him; he can know it only after undertaking a certain procedure, one which takes time and which involves other people. But what part of this makes the knowledge mediate rather than immediate? After all, surely the recognition of inner states sometimes requires temporally extended procedures which involve the participation of others. It’s possible to discover that one is in a mood by seeing how others react to you. Someone emotionally dissociated might even use this as their primary source of information about their emotional life. Granted, such a person’s life would be unusual in certain
ways, but what would stand in the way of us saying that their emotions were immediately accessible to them through the testimony of their partner?

Or, to put this point the other way, we may ask what could count as Jack’s having immediate knowledge of his height. It is not enough, presumably, that he memorises an answer and that the answer be correct. This could hold without his having the concept of measurement at all. Perhaps we might say that Jack displays such knowledge if he reacts appropriately in certain contexts. And here we might design various experiments, for instance, asking him to place himself in the appropriate position in a line-up of people sorted by height, or putting him in a VR simulation which represents him as travelling along a road and passing under bridges of varying heights, and telling him to duck if and only if the bridge seems to be too low for him to pass safely underneath.

Of course, these quasi-experiments as stated have various drawbacks. In the VR case, for instance, Jack might well instinctively be more conservative and duck under bridges that he may reasonably claim to know are high enough for him to safely pass. Here, one may want to say, we see an in-built risk aversiveness which cannot easily be overridden by a belief that there is no real danger in the situation.\textsuperscript{10} Equally, there might be a confounding factor of anxiety at work in this situation; a desire to perform well on the test and to demonstrate good bodily awareness might lead Jack to second guess and to return results which do not generalise to his behaviour in unreflective, spontaneous circumstances.

More to the point, both experiments have a certain ambiguity in their results, namely, do they demonstrate Jack’s knowledge of his height, or rather his knowledge of his height relative to his surroundings? How do we infer from the results of these experiments to conclusions about his knowledge of facts concerning him himself? We can imagine these coming apart. What if, for instance, Jack can place himself in the line-up in the appropriate position, but when asked to estimate his height gives wildly inaccurate guesses? (We could imagine that he can accurately estimate other people’s heights.) What if he can accurately place himself in the line-up, but cannot recognise himself in photos, so that when given a photograph of the group he cannot say which person he is, and so cannot tell you whether he was in the taller or the shorter half of the line? And so on.

Of course, these cases need further development, and it might be characteristic of the cases that beyond a certain point they do not bear such scrutiny—that after a while we do not know what to say about people’s who self-knowledge is so radically fractured.\textsuperscript{11} And we should note that examples where self-knowledge comes apart in this way typically involve either artifice

\textsuperscript{10} This could for instance be phrased in Kahneman’s terms as a conflict between the System 1 and System 2 [see Kahneman 2011].

\textsuperscript{11} Compare Wittgenstein’s cases of examples of outré measurement practices in [Wittgenstein 1956, Part I, §§ 140–153] and discussion in [Stroud 1965].
in the environment or a subject with some atypical psychological condition. This reflects the fact that we regulate ourselves and our environments in such a way as to ensure that (superficial rather than profound) self-knowledge is typically given without its being an achievement.

Attention to these background regulatory processes which allow us to take self-knowledge for granted can reveal to us some of the remarkable complexity involved in the creation and maintenance of the integrated individual, who possesses a conception of herself as existing over time, as persisting even through transformative experiences, and as having a unique point of view on the world. This is the excessively familiar and hence taken-for-granted background to which both Köhler and Wittgenstein wish to draw our attention—with the chief difference between them being over how the metaphor of foreground and background is to be taken.

From Wittgenstein’s point of view the most difficult achievement is to recognise that the foreground/background contrast, central to the idea of language as functioning to regiment or represent experience, is itself a context-sensitive matter—what is the foreground and what the background depends on one’s point of view. Thus, our statements do not only precisify our experience but provide the structural context in which such experiences are located. If, after his gesture, Jack laughs and then reports his height in feet and inches, we take him at face value—if he then discovers that by a new measurement he is mistaken and is, say, 6” taller than he thought, his response ought to be one of shock, incredulity, disbelief. It ought to be, in the sense that if he takes this in his stride then we would be puzzled—that someone could be so wrong about their height and not find this disconcerting is something that we would find disconcerting.

These feelings express a need for repair or recalibration. They are in this sense transitional experiences, in pointing the way to the (re-)attainment of a condition beyond themselves. (Though of course one may find oneself stuck in such a feeling.) Except in cases where the mismatch can be explained away as an error or a slip, repair here may lead not to a return to a prior condition but rather a development. After all, the achievement of knowledge concerning oneself—even in cases as humble as knowing one’s height—is a development, a modification of the organism. Humans grow and change, and our experiments designed to elicit responses and determine underlying conditions within subjects involve interfering with them in ways that may well leave the subject more sophisticated or proficient. After a battery of tests, Jack may become an expert at estimating relative heights and may have a more sophisticated knowledge of his relative size than he had when the experiment started.

On these grounds I think that we cannot uncritically help ourselves to the notion of the “first-hand world”, in the way that Köhler does, and that in so doing we are failing to heed Wittgenstein’s injunction that “what’s ragged should be left ragged” [Wittgenstein 1980, 46e]. In talking about a first-
hand world, distinct from that of science and apparently consistent within itself (unless one adopts a scientific frame of mind of course), Köhler suggests we have an idea of what a vantage point would look like from which the components of such a world could all be open to view. This assumption places Köhler squarely within the phenomenological tradition in which experience is taken to form a preconceptual “given” on which language operates. This assumption can be seen at work in Merleau-Ponty’s approving citation of Husserl’s concept of “operative intentionality”, defined as:

That which produces the natural and antepredicative unity of the world and of our life, being apparent in our desires, our evaluations and in the landscape we see, more clearly than in objective knowledge, and furnishing the text which our knowledge tries to translate into precise language. [Merleau-Ponty 1945, xx]

Here we have a picture of picture of judgement as “operating on” experience, processing it as a kind of raw data, with the operation in question further delineated as the translation of experience into “precise language”. The suggestion then is that experience is both the same kind of thing as language, only less precise, and yet at the same time as existing prior to language and being the material on which it works. That is in essence the same way in which Köhler treats the first-hand world, with its precisification being the work of the natural sciences.

Of course, Köhler thinks that a description of the first-hand world, say of an individual’s visual experience, requires reference to facts about the material world as well, and for this reason he includes such facts within the inventory of first-hand things. In this way, there is on his view what we might call an entanglement between the “inner” and the “outer”. This entanglement forms a centrepiece of his criticism of introspectionist attempts to separate out our conscious attention from our bodily movements, and—in the reverse direction—his criticism of behaviourist attempts to formulate a language of basic behaviour in which the movements of organisms can be described in terms which do not presuppose mental concepts [GP, pp. 7–60].

Köhler also emphasises the importance of action in the shaping of visual perception—Gestalt switches are related to our capacities to act, insofar as they can be trained or modified through changes in setting (so-called “Einstellung effects” [see Luchins 1942]). As Wittgenstein puts it, when we come to explain the way in which our visual experiences can undergo shifts in aspect, we will often be moved to say that “the substratum of the experience is mastery of a technique” [PII, xi, 208e].

However, despite these points, Köhler’s generalising tendencies, allied to his interest in visual perception, inevitably leads him to a position on which the fundamental condition of human life is one of inhabiting a private world, populated by objects of inner awareness—and starting from this point of view, any attempt to reintroduce publicly accessible facts is destined to
seem unsatisfactory. Thus, Wittgenstein’s complaint of Köhler, that in his account of the switch of aspect (in for instance the change from seeing the Necker cube in one to the other orientation), the inner organisation becomes a “queerly shifting construction” [PII, xi, 196e]. Seen in this light, Köhler’s psychophysical identity theory is really the flipside of his phenomenology—having defined “the world” in such a way that scientific representation stands apart from it, mind-brain isomorphism can seem the only way to reconnect the two realms which he has thus separated.

This forms an important point of contrast between Köhler and Wertheimer. When Köhler comes to incorporate Wertheimer’s insights within his overall picture, he subordinates the growth of understanding to the framework of Gestalt shifts as a sub-personal mechanism operating as part of a subject’s perceptual experience. Accordingly, he locates the significance of Gestalt perception at a sub-personal level:

> [Certain most important intellectual achievements] are often made possible by an abrupt reorganization of given materials, a revolution, the result of which suddenly appears ready-made on the mental scene. From where does it come? Where does the revolution as such take place? It can occur only in that strangest of all systems, the brain, which seems, better than the active self, able to do precisely such things—but, to repeat, only when the crucial material has first been thoroughly examined and made ready in active mental work. Why do such revolutions which occur in certain brains tend to be the right revolutions? This is the same question we asked ourselves before: why do brain processes tend to produce perceptual organizations of remarkable clearness of structure? At least this part of nature, the human brain, seems to operate in a most selective fashion. It is the direction of its operations which is truly remarkable. [Köhler 1969, 163–164, emphasis added]

The differences between Wertheimer and Köhler are not therefore simply differences in interest or emphasis. For Wertheimer there is no sense that “scientific” problems can be separated from everyday life, as if “ordinary people” found their everyday experience unproblematic. Life, we might say, is riven with contradictions, mysteries, surprises, and it does not require a scientific attitude to uncover these—indeed, in its positivistic and generalising tendencies a natural scientific framework can sometimes obscure the true nature of a problem. And yet Wertheimer is not at all opposed to the scientific spirit. Rather, he aims to transform our sense of the importance of intellectual enquiry by locating the pursuit of knowledge on the background of a quest for understanding. This means recognising that there is no universally clear separation between the solution to intellectual difficulties and settling questions concerning how to live. Instead, and following Spinoza, Wertheimer and Wittgenstein alike provide models of thinking according to which the
solution of intellectual problems can be seen to be part of a process of overcoming difficulties which arise from one’s position in the world.

Therefore, by starting with a notion of a Gestalt as something which structures a problem-situation, rather than as a property of an experience, Wertheimer begins at a point which takes for granted a shared world. This is not something characterizable in individualistic terms, and is not even easily characterizable, period. Figuring out what needs to be done is a shareable (even if not always shared) enterprise, and one not always distinguishable from figuring out what one is doing. In its Wittgensteinian echo: “A philosophical problem has the form ‘I don’t know my way about’” [PI § 123].

Accordingly, for Wertheimer the key frame for utilising Gestalt principles is not only one of individual subjects as entangled within the world—as acting and reacting, and so forth—but is rather one of subjects as growing and changing, as transitioning to a state of greater understanding (or stalling along the way). These are notions which depend on a point of reference external to the individual’s immediate and particular situation, and which is not obviously open to introspection, but may rather only be accurately seen from the perspective of a suitably engaged second—or third—party, or by the subject herself, actively engaged in stepping beyond herself though the work of the imagination. On these grounds, I suggest that Wertheimer’s spirit is kindred to Wittgenstein’s; that their approach diverges in key respects from Köhler’s; and that there remains life in Gestalt psychology yet.

Bibliography


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