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## Gestalt Theory and Its Reception An Annotated Bibliography

The list which follows is intended as a comprehensive bibliographical survey of the wider Gestalt tradition from Graz and Berlin to Padua, Frankfurt and New York. The diagram overleaf provides some indication as to what I take this tradition to be. Both the lines representing teacher-pupil relationships and also the groupings into schools should however be taken with a pinch of salt. One may in certain cases be dealing with little more than indirect influences or loose associations of contemporaries. The alphabetical ordering, superficially the least perspicuous of all possible compromises, has been adopted simply because of its neutrality in comparison with the various (thematic or chronological) alternatives. Its defects have, it is hoped, been rectified by the provision of a comprehensive index on pp.479ff. below.

I have included, as far as possible, all the classic texts of the Gestalt psychological tradition, together with the more important translations and reprints thereof. Works outside this central core have been included either because they have a particular philosophical or historical relevance to the Gestalt tradition as a whole, or because, even though written by secondary figures within the tradition, they fall squarely within the fields of theoretical and perceptual psychology. I have included secondary Gestaltist literature outside these fields only in very special cases. Thus I have not ventured into areas such as social and animal psychology, developmental and educational psychology, psychopathology, etc., except where individual items seemed to be of particular historical importance. Purely experimental works have also not been listed, though exceptions have been made in certain cases (above all Benussi, Rausch, Witasek, Musatti, Kanizsa) where it seemed important to aim for completeness. In relation to a limited number of topics I have included also works by authors outside the Gestalt tradition, but only

where these seemed to me to be crucial to the understanding of important theoretical currents within Gestalt theory proper. This is the case in relation to the following themes:

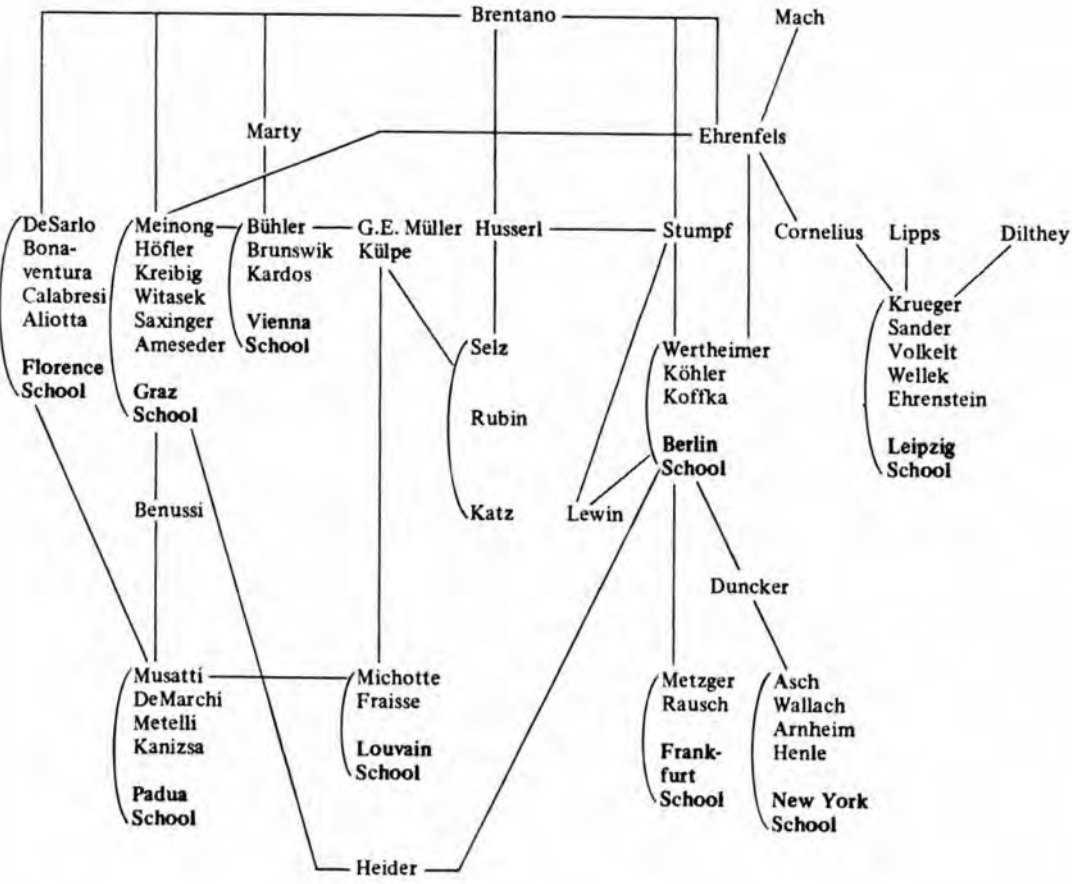
- *the concepts of Prägnanz* or ‘good form’ and related treatments of aesthetic phenomena and of pattern recognition
- cognitive processes and problem-solving
- criticisms of Gestalt theory
- phenomenal causation
- figure-ground relations, phenomenal boundaries, subjective contours
- phenomenal motion
- perceptual constancies
- philosophical inquiries into the nature of ‘configuration’, ‘relation’, ‘structure’, etc., and writings on psychological holism (but only insofar as these relate directly to the literature of Gestalt psychology proper).

Readers interested in the last, in particular, may turn to the bibliography of writings on the theory of parts and wholes in Smith 1982.

The annotations are intended only as a very rough and ready first guide through the literature. They should not be looked upon as a substitute for standard reference works and no significance should be awarded to the absence of annotations in relation to any particular item. An enterprise of this nature could be carried forward ad infinitum, and a more or less arbitrary boundary had to be drawn around the material annotated even at the risk of a certain unevenness in the configuration which results. In relation to the larger and more comprehensive items – for example the textbooks of Köhler and Koffka – it has been possible to provide at most only brief indications in relation to one or two of the issues treated. Where, however, the attempt has been made to summarize the main theses or arguments of a work, then the views expressed are intended to represent those of the author of the work in question and not those of the compiler of this bibliography.

I am grateful to Mitchell Ash (Iowa), Niels Bokhove (Utrecht), Horst Gundlach (Passau), Kevin Mulligan (Geneva), Csaba Pléh (Budapest) Michael Stadler (Bremen), and Natale Stucchi (Geneva) for their help in the compilation of this list (though the responsibility for the errors is of course all my own). I should also like to thank the librarians of that eighth wonder of the philosophical world, the University Library of Erlangen, who made it possible.

# Schools and Influences within the Gestalt Tradition



## Bibliography

- Aarons, L.            1964    "Visual Apparent Movement Research: Review 1935- 55 and Bibliography 1955-63", *Perceptual and Motor Skills*, 18, 239-74.
- Abe, S.                1930    "[Contributions to the Psychology of Time Comparison]" (in Japanese), *Sinrigaku Kenkyu*, 5.
- 1931    "[An Experimental Study on Influence of Pause in Paired Comparison of Time-Intervals]" (in Japanese), *Sinrigaku Kenkyu*, 6, 867- 884.
- 1933    "Die Erscheinungsweisen der Zeitgestalten", *Tohoku Psychologica Folia* (Sendai, Japan), 1, 1-36. Qualitative experiments on time-perception in the spirit of the Würzburg school and influenced by Benussi, Witasek and Katz. Time as perceived is not homogeneous: all perception of time manifests one or other variety of Gestalt structure.
- Abelskaya, R. and    1929    "[The Principal Problems of Psychology in the Light of the Gestalt Theory]" (in Russian), *Voprosy Pedagogii*, 5/6, 105-29.
- Neopichanova, O.
- Ach, N.                1930    "Über die Gefügigkeitsqualität", in H. Volkelt, ed., *Bericht über den 11. Kongreß für experimentelle Psychologie in Wien, 1929*, Jena: Fischer, 45-52.
- 1932    *Finale Qualität und Objektion*, *Archiv für die gesamte Psychologie*, Ergänzungsband 2, Leipzig: Barth.
- 1932a    "Das Kompensations- oder Produktionsprinzip der Identifikation. Ein psychologisches Grundgesetz", in G. Kafka, ed., *Bericht über*

- den 12. Kongreß der Deutschen Gesellschaft für Psychologie in Hamburg, 1931, Jena: Fischer, 280-88. On the Gestalt qualities produced through fusion (which Ach refers to as 'Identifikation').
- Ackerknecht, E. 1913 "Über Umfang und Wert des Begriffes 'Gestaltqualität'", *Zeitschrift für Psychologie*, 67, 289-293. Defence of production theory along the lines of Witasek 1910. Conceives the Gestalt quality as 'a quite specific, purely sensational synthesis of several simultaneous or immediately successive sense impressions within one and the same sense region, which goes beyond the mere content of these sense impressions and manifests a pronounced feeling tone'. Gestalt qualities constitute a quite new and important stratum of psychic processes. (p.289)
- Ackermann, A. 1924 "Beiträge zur Psychologie der Gestalt. IX [ed. by K. Koffka], Farbschwelle und Feldstruktur", *Psychologische Forschung*, 5, 44-84.
- Adams, P. A. see Köhler and Adams.
- Ajuriaguerra, J. de 1954 "L'état actuel de la théorie de la Gestalt en psychoneurologie", *Schweizerische Zeitschrift für Psychologie*, 13, 16-51.
- Akio Ono 1960 "An Investigation on Perception of Causal Relations", *Tohoku Journal of Experimental Psychology*, 2, 164-71.
- Akishige, Y. 1958 "Studies on Constancy Problem in Japan", *Psychologia*, 1, 143-57.
- 1961 "Theoretical Considerations on the Problems of Perceptual Constancies", *Bulletin of the Faculty of Literature, Kyushu University*, no.7, 1-58.
- 1965 "Perceptual Constancy and the Law of Conservation of Perceptual Information", *Bulletin of the Faculty of Literature, Kyushu University*, no.9, 1-45.
- 1967 "Mind-Body Monism on the Base of the Theory of Perceptual Constancy", *Bulletin of the Faculty of Literature, Kyushu University*, no.10, 177-91.

- Albien, G. 1907/08 "Der Anteil der nachkonstruierenden Tätigkeit des Auges und der Apperzeption an dem Behalten und der Wiedergabe einfacher Formen", *Zeitschrift für experimentelle Pädagogik*, 5, 133-56, 6, 1-48.
- Allesch, G. J. von 1910 "Über das Verhältnis der Ästhetik zur Psychologie", *Zeitschrift für Psychologie*, 54, 401-536. See esp. the discussion of Witasek, Stumpf and Meinong. Allesch was Köhler's first assistant in Berlin, though he referred to Stumpf and Meinong as his most important teachers.
- 1921 *Wege zur Kunstbetrachtung*, Dresden: Sibyllen.
- 1925 "Die ästhetische Erscheinungsweise der Farben", *Psychologische Forschung*, 6, 1-91, 215-81. Experiments under the guidance of Stumpf on the aesthetic effects of colour.
- 1931 *Zur nicht-euklidischen Struktur des phänomenalen Raumes (Versuche an Lemur mongoz mongoz L.)*. Aus dem psychologischen Laboratorium der Universität Greifswald, Jena: G. Fischer
- 1939/40 "Die Begriffe Ganzheit und Eigenschaft", *Archiv für die gesamte Psychologie*, 105, 36-57.
- 1941 "Die Wahrnehmung des Raumes als psychologischer Vorgang", *Die Gestalt (Abhandlungen zu einer allgemeinen Morphologie)*, 3, 1-44.
- 1943 "Über das Verhältnis des Allgemeinen zum realen Einzelnen", *Archiv für die gesamte Psychologie*, 111, 23-38.
- 1950 "Grundzüge einer allgemeinen Gestaltlehre", *Proceedings and Papers of the 12th International Congress of Psychology at Edinburgh, 1948*, Edinburgh and London: Oliver and Boyd, 33-34. The pervasiveness of Gestalt formations, especially in the biological sphere, calls for a revision of the concept of causality.
- Allport, F. H. 1954 "The Structuring of Events. Outline of a General Theory with Applications to

- Psychology", *Psychological Review*, 61, 281-303.
- 1955 *Theories of Perception and the Concept of Structure. A Review and Critical Analysis with an Introduction to a Dynamic-Structural Theory of Behavior*, New York: John Wiley and Sons:
- Sensory qualities and dimensions seem to have been slighted in the gestalt theory of perception. Much has been said about the fact that they are affected by field changes and are subservient to the laws of the whole; but these statements do not do them justice...They cannot be explained by isomorphism since they are merely continuances or 'spreads' of a homogeneous quality or dimension; and they are without form or articulation...In throwing out elementarism gestalt theory has not been successful in covering the phenomena of which the elementarists tried to give some account. (p.139)
- 1967 "A Theory of Enestruence (Event-Structure-Theory). Report of Progress", *American Psychologist*, 22, 1-24.
- Allport, G. 1923/24 "The Standpoint of Gestalt Psychology", *Psyche*, 4, 354-61. Cautiously welcomes moves towards investigation of the whole-structures of mental life.
- Ames, A. Jr. 1951 "Visual Perception and the Rotating Trapezoidal Window", *Psychological Monographs*, 65, whole no. 324.
- Ameseder, R. 1901 *Zur Systematik der idealen Gegenstände*. Dissertation, Graz. Part I deals with comparative relations, identity, difference, similarity, etc. Part II deals with 'Complexionen'.
- 1904 "Beiträge zur Grundlegung der Gegenstandstheorie", in Meinong, ed., 51-120. Esp. VIII. on "Gestaltgegenstände". The treatment of "Verbindungsgegenstände und ihre Relata" (p.116) is an early formulation of the opposition between Gestalt complexes and Und-Verbindungen or purely summative wholes.
- 1904a "Über Vorstellungsproduktion", in Meinong, ed., 481-508. Defence of production theory

against the background of Meinong's ontology. Since Gestalten are founded contents, it follows that they are ideal, i.e. outside space and time. In this respect they are like relations of similarity and difference. Thus they cannot be *perceived*; they must be grasped by an intellectual act of 'Vorstellungsproduktion'.

- 1904b "Über absolute Auffälligkeit der Farben", in Meinong, ed., 509-26.
- Amin, I. 1973 *Assoziationspsychologie und Gestaltpsychologie: Eine problemgeschichtliche Studie mit besonderer Berücksichtigung der Berliner Schule*, Bern/Frankfurt: Lang. Begins with a historical treatment of theories of association, especially those of Aristotle and of the British empiricists. This is followed by a study of the turn to holistic modes of thought around 1890 (Wundt, James, Dilthey, Ehrenfels), concluding with a survey of the work of Wertheimer, Köhler, Koffka and Lewin.
- Anderson, N. S., Pine, S. M. and Rosenfield, A. 1975 "Derived Scales for Degree of Simultaneous Contrast in six Benussi Ring Figures", *Bulletin of the Psychonomic Society*, 6, 289-92.
- Angyal, A. 1931 "Über die Raumlage vorgestellter Örter", *Archiv für die gesamte Psychologie*, 78, 47-94. On the illusions of orientation e.g. in finding one's way around a city, and on the interplay of different factors in our conceptions of direction.
- 1939 "The Structure of Wholes", *Philosophy of Science*, 6, 25-37. See Grelling and Oppenheim 1939a.
- 1941 *Foundations for a Science of Personality*, London: Oxford University Press, 2nd ed., 1948. Holistic approach to personality theory.
- Anschütz, G. 1909 *Über Gestaltqualitäten*, Erlangen: Junge and Sohn (Dissertation, München, under Lipps). Historical survey of the work of Ehrenfels, Meinong, Cornelius, etc., in the spirit of Lipps. Anschütz affirms, against Ehrenfels, that the activity of the ego is the presupposition of the unification of presentations: 'It is the absolute *Ich* which creates those peculiar total-qualities



- which are "categorical determinations of objects".' (p.53)
- 1926 "Untersuchungen über komplexe musikalische Synopsis", *Archiv für die gesamte Psychologie*, 54, 129-274.
- 1953 *Psychologie. Grundlagen, Ergebnisse und Probleme der Forschung*, Hamburg: Meiner.
- Anson, R. see Rock and Anson.
- Anttila, R. 1977 "Dynamic Fields and Linguistic Structure: A Proposal for a Gestalt Linguistics", *Die Sprache*, 23, 1-10. On the fruitfulness for linguistics of the Gestaltist idea of dynamic fields.
- (forth- "Dynamics in Morphology", *Acta Linguistica*  
coming) *Hungarica* (the essay is titled after Köhler 1940).
- Anzyferowa, L. I. 1969 *Behaviorismus, Gestaltpsychologie, Tiefenpsychologie (Psychologische Beiträge 11)*, Berlin: Volk und Wissen. (German translation of extracts from *Sovremennaya psichologiya v kapitalističeskich stranach* (Contemporary Psychology in the Capitalist Countries), Moscow: Izd-vo Akademii Nauk SSSR, 1963.) On Gestalt-psychology see pp.65-125: a survey of developments from Mach to Lewin, mainly historical, with some treatment of Soviet work on chimpanzees.
- Arezzo, G. 1970 "'Gestalt' como struttura", *Bollettino di Psicologia Applicata*, vol. 100-102, 155-202. Historical survey of the Gestalt tradition and discussion of the relations of Gestalt theory to the thought of Bertalanffy, Piaget, Lévi-Strauss and Chomsky.
- Arnaboldi, M. 1966 *Genesi della forma*, Padua: Marsilio.
- Arnheim, R. 1928 "Untersuchungen zur Lehre von der Gestalt. IV [ed. by M. Wertheimer], Experimentellpsychologische Untersuchungen zum Ausdrucksproblem", *Psychologische Forschung*, 11, 2-132.
- 1943 "Gestalt and Art", *Journal of Aesthetics and Art Criticism*, 2, 71-75.

- 1947 "Perceptual Abstraction and Art", *Psychological Review*, 54, 66-82; repr. in Arnheim 1966, 27-50.
- 1949 "The Gestalt Theory of Expression", *Psychological Review*, 56, 156-71, repr. in Henle, ed., 1961, 301-23 and in Arnheim 1966, 51-73. On the similarities between perceptions and the emotional qualities they express.
- 1951 "Gestalt Psychology and Artistic Form", in Whyte, ed., 196-208.
- 1954 *Art and Visual Perception. A Psychology of the Creative Eye*, Berkeley: University of California Press, rev. ed., 1974 (German trans. *Kunst und Sehen. Eine Psychologie des schöpferischen Auges*, Berlin: de Gruyter, 1965; revised ed., 1978).
- 1955 "A Review of Proportion", *Journal of Aesthetics and Art Criticism*, 14, 44-57, repr. in Arnheim 1966, 102-19.
- 1960 "Gestalten von gestern und heute", in Weinhandl, ed., 79-85. Eng. trans. "Gestalten - yesterday and today", in Henle, ed., 1961, 90-96. Account of later developments in Gestalt theory against the background of Ehrenfels' views. The essay includes a brief discussion of the Berlin school view of time and memory phenomena and Arnheim draws attention in particular to the variability in objective duration of that experienced temporal boundary which is the present:  
 ...the range of the psychological present is determined by the strength and boundary of the Gestalt context. A passage of music, for example, which is conceived by the listener as an indivisible unity, appears to be "in the present". (p.93)
- 1961 "Contemplation and Creativity" in *Festschrift Kurt Badt zum 70. Geburtstag*, Berlin: de Gruyter, 8-16; repr. in Arnheim 1966, 293-301. On some theoretical implications of the perception of simple geometrical figures.

- 1966 *Toward a Psychology of Art. Collected Essays*, Berkeley and Los Angeles: University of California Press.
- 1969 *Visual Thinking*, Berkeley and Los Angeles: University of California Press.
- 1971 *Entropy and Art. An Essay on Order and Disorder*, Berkeley: University of California Press. Dedicated to the memory of Köhler.
- 1975 "Anwendung gestalttheoretischer Prinzipien auf die Kunst", in S. Ertel, ed., 278-84.
- 1981 "Bemerkungen zu Keilers Aufsatz über Isomorphie", *Gestalt Theory*, 3, 269-73.
- 1983 "Style as a Gestalt Problem", *Gestalt Theory*, 5, 3-15.
- Arnoult, M. D. see Attneave and Arnoult.
- Artemov, V. A. 1928 "[Present-Day German Psychology]" (in Russian), *Psichologiya*, 1, 66-94. Includes a treatment of the Berlin and Leipzig schools.
- Asch, S. E. 1946 "Forming Impressions of Personality", *Journal of Abnormal and Social Psychology*, 41, 258-90, repr. in Henle, ed. 1961, 237-85. Subjects were presented with lists of traits and asked to form an impression of the type of person who would be associated with the given traits. Principles of organization they employed are summarized by Asch as follows:
1. There is an attempt to form an impression of the entire person. The subject can see the person only as a unit;...even when the factual basis is meager; the impression then strives to become complete, reaching out toward other compatible qualities...
  2. As soon as two or more traits are understood to belong to one person, they cease to exist as isolated traits, and come into immediate dynamic interaction...the traits order themselves into a structure ...The representation in us of the character of another person possesses in a striking sense certain of the qualities of a system.
  3. In the course of this process some characteristics are discovered to be central... These set the direction for the further view of the person and for the

concretization of the dependent traits. As a rule the several traits do not have equal weight. And it is not until we have found the center that we experience the assurance of having come near to an understanding of the person.

4. The single trait possesses the property of a part in a whole. A change in a single trait may alter not that aspect alone, but many others – at times all. As soon as we isolate a trait we not only lose the distinctive organization of the person; the trait itself becomes abstract. The trait develops its full content and weight only when it finds its place within the whole impression.

5. Each trait is a trait of the entire person. It refers to a characteristic form of action or attitude which belongs to the person as a whole. In this sense we may speak of traits as possessing the properties of Ehrenfels-qualities. Traits are not to be considered as referring to different regions of the personality, on the analogy of geographical regions which border on another.

6. Each trait functions as a *representative* of the person. We do not experience anonymous traits, the particular organization of which constitutes the identity of the person. Rather the entire person speaks through each of his qualities, though not with the same clearness.

7. In the process of mutual interaction the concrete character of each trait is developed in accordance with the dynamic requirements set for it by its environment. There is involved an understanding of necessary consequences following from certain given characteristics for others. The envy of a proud man is, for example, seen to have a different basis from the envy of a modest man.

8. On this basis consistencies and contradictions are discovered. Certain qualities are seen to cooperate; others to negate each other... Disturbing factors arouse a trend to maintain the unity of the impression, to search for the most sensible way in which the characteristics could exist together, or to decide that we have not found the key to the person...

9. It follows that the content and functional value of a trait change with the given context... A trait central in one person may be seen as secondary in another. Or a quality which is now referred to the person may in another case be referred to outer conditions (p.284f.; p.276ff. of reprint)

1946a "Max Wertheimer's Contribution to Modern Psychology", *Social Research*, 13, 81-102.

1952 *Social Psychology*, New York: Prentice Hall.

- 1961/62 "A Problem in the Theory of Associations", *Psychologische Beiträge*, 6, 553-63.
- 1968 "Wolfgang Köhler: 1887-1967", *American Journal of Psychology*, 81, 110-19.
- 1968a "Gestalt Theory", *International Encyclopedia of the Social Sciences*, 6, 158-75.
- Ash, M.G. 1980 "Fragments of the Whole: Documents of the History of Gestalt Psychology in the United States, the Federal Republic of Germany and the German Democratic Republic", in J. Brozek and L. Pongratz, eds., *Historiography of Modern Psychology*, Toronto: Hogrefe, 187-200.
- 1980a "Experimental Psychology in Germany before 1914: Aspects of an Academic Identity Problem", *Psychological Research*, 42, 75-86.
- 1980b "Academic Politics in the History of Science: Experimental Psychology in Germany, 1879-1941", *Central European History*, 13, 255-86.
- 1981 "Zu einer Annahme von Peter Keiler: Eine Berichtigung", *Gestalt Theory*, 3, 153-54.
- 1982 *The Emergence of Gestalt Psychology. Experimental Psychology in Germany 1890-1920*, Dissertation, Harvard, Ann Arbor: University Microfilms. The most thorough historical account of the origin and background of the Berlin Gestalt school. Describes particularly the institutional and political factors involved in the rise of the Berlin school.
- 1983 "Die deutschsprachige Psychologie im Exil: Forschungsansätze und -ergebnisse zum Problem des Wissenstransfers", *Bericht über den 33. Kongreß der Deutschen Gesellschaft für Psychologie in Mainz, 1982*, Göttingen: Hogrefe, 106-13.
- 1984 "Disziplinentwicklung und Wissenschaftstransfer – Deutschsprachige Psychologie in der Emigration", *Berichte zur Wissenschafts-*

- geschichte*, 7, 207-26. Includes a study of the reception and integration of Gestalt theory in the USA, both before and after 1933.
- 1985 "Ein Institut und eine Zeitschrift. Das Psychologische Institut der Universität Berlin und die Zeitschrift 'Psychologische Forschung' vor und nach 1933", in C.-F. Graumann, ed., 113-37.
- 1985a "Gestalt Psychology: Origins in Germany and Reception in the United States", in C. Buxton, ed., *Points of View in the Modern History of Psychology*, New York/San Diego: Academic Press, 295-344.
- 1985b "The Role of Developmental Concepts in the History of Gestalt Theory: The Work of Kurt Koffka", in G. Eckhardt, W. G. Bringmann and L. Sprung, eds., *Contributions to the History of Developmental Psychology*, Berlin/New York/Amsterdam: Mouton, 341-57.
- 1987 "Die Entwicklung des Wiener Psychologischen Instituts 1922-1938", in A. Eschbach, ed. A study of Bühler and his circle.
- Asmus, W. 1956 "Ganzheit als Problem", in *Die Ganzheit in Wissenschaft und Schule. Johannes Wittmann zum 70. Geburtstag*, Dortmund: Crüwell, 11-35.
- Attneave, F. 1950 "Dimensions of Similarity", *American Journal of Psychology*, 63, 516-56.
- 1954 "Some Informational Aspects of Visual Perception", *Psychological Review*, 61, 183-93.
- 1955 "Symmetry, Information, and Memory for Patterns", *American Journal of Psychology*, 68, 209-22. That symmetrical dot-patterns are not easier to remember than asymmetrical patterns with the same information content is held to throw light on the Gestalt doctrine that figural goodness is favourable to memory.
- 1959 *Applications of Information Theory to Psychology*, New York: Holt, Rinehart and Winston.

- 1971 "Multistability in Perception", *Scientific American*, 225, 62-71.
- 1974 "Apparent Movement and the What-Where Connection", *Psychologia*, 17, 108-20.
- 1982 "Prägnanz and Soap-Bubble Systems: A Theoretical Exploration", in J. Beck, ed., *Organization and Representation in Perception*, Hillsdale, N.J.: Erlbaum.
- Attneave, F. and Arnoult, M.D. 1956 "The Quantitative Study of Shape and Pattern Perception", *Psychological Bulletin*, 53, 452-71.
- Bachmann, T. 1978 "Cognitive Contours: Overview and Preliminary Theory", *Problems of Communication and Perception*, 7, 31-60. Attempts to combine the best features of the sensory and cognitive theories of subjective contours, deriving subjective contours from interactions among the levels of a multi-level information processing system.
- Bagnara, S. and Sambin, M. 1977 "Il postulato dell' isomorfismo", *Per un'analisi storica e critica della psicologia*, 2, 159-87.
- Bahle, J. 1934 "Die Gestaltübertragung im vokalen Schaffen zeitgenössischer Komponisten", *Archiv für die gesamte Psychologie*, 91, 444-51. On the relation between musical composition and experienced feeling-Gestalten.
- Bahnsen, P. 1928 "Eine Untersuchung über Symmetrie und Asymmetrie bei visuellen Wahrnehmungen", *Zeitschrift für Psychologie*, 108, 129-54. On the perception of stripe-figures and the role of symmetry in the determination of figure and ground (by pupil of Rubin).
- Barbado, M. 1942 "Antecedentes inmediatos de la 'Gestalt-psychologie'", *Revista de Filosofía*, 1, 372-76.
- Bartel, H. 1937 "Über die Abhängigkeit spontaner Reproduktion von Feldbedingungen", *Psychologische Forschung*, 22, 1-25.

- Bartley, M. 1926 "The Major Categories of Psychology", *Psychological Review*, 33, 71-105.
- Bartley, S. H. see Wheeler, *et al.*
- Beardslee, D.C. and Wertheimer, Michael 1958 *Readings in Perception*, Princeton: Van Nostrand.
- Becchi, E. 1959 "Fenomenologia e Gestalt", *Aut-Aut*, 50, 116-23. Sketch of development from early Gestalt theory to Husserl's notion of *Lebenswelt*.
- Becher, E. 1911 *Gehirn und Seele*, Heidelberg: Winter. Utilizes psychological data derived in part from form-perception as a means of refuting then current ideas in neurophysiology and, more generally, of establishing the non-physical reality of the psychical. Defends an interactionist conception of psychical causality similar to that of Stumpf.
- 1921 "W. Köhlers physikalische Theorie der physiologischen Vorgänge, die der Gestaltwahrnehmung zugrunde liegen", *Zeitschrift für Psychologie*, 87, 1-44 (dedicated to Benno Erdmann). Sympathetic exposition and critique of Köhler 1920 stressing chemical and biological aspects of Köhler's work. Becher argues that it is necessary to distinguish three different kinds of physical Gestalten according to the different kinds of causal coherence they involve. He distinguishes 1. physical Gestalten manifesting no causal coherence (e.g. a shadow, three pieces of wire lying side by side on a table); 2. those manifesting local causal coherence, in which only the neighbouring parts can influence each other (e.g. an electric circuit); and 3. those manifesting universal causal coherence (e.g. an ionized solution, where all parts and moments have effects on all the others). There are Gestalt structures not reducible at all to universal causal coherence, but these are to be found only in the sphere of animate organisms (and particularly of the psyche), and never in inanimate nature.



- Beck, J. 1966 "Perceptual Grouping Produced by Changes in Orientation and Shape", *Science*, 154, 538-40.
- 1972 *Surface Colour Perception*, Ithaca and London: Cornell University Press.
- Becker, J. 1935 "Über taktil-motorische Figurwahrnehmung. Versuche mit 9-11jährigen Kindern", *Psychologische Forschung*, 20, 102-58.
- Becker, J. and Rausch, E. 1952 "Visuelle Gebilde mit koordinierten Gliedern", *Acta Psychologica*, 8, 300-321. Investigation of conditions governing visual formations whose elements appear to have equal weight – i.e. appear in such a way that no single element or group of elements predominates.
- Belaiew-Exemplarsky, S. 1934 "Die Auffassung melodischer Bewegung. Experimentelle Untersuchung zur Struktur des melodischen Geschehens", *Archiv für die gesamte Psychologie*, 92, 370-422. Experimental study of the perception of melodic motion.
- Belaiew-Exemplarsky, S. and Jaworsky, B. 1926 "Die Wirkung des Tonkomplexes bei melodischer Gestaltung", *Archiv für die gesamte Psychologie*, 57, 489-522. On the role of closure, expectation and set in musical perception and on the reasons why some tones within a melodic context give an impression of completion.
- Bell, R. A. 1968 *An Analysis of Gestalt Principles of Perceptual Organization*, Dissertation, Kansas State University. Experimental examination of four laws of organization.
- Benary, W. 1923 Review of Selz 1922, *Psychologische Forschung*, 3, 417-25. Accuses Selz of propounding a machine-theory of the processes of thinking, i.e. a theory which is, from the perspective of the Gestalt-psychologists, still bound to a certain sort of associationism which ignores factors of meaning or significance and pays too little attention to the structures of the *objects* of thought.

- 1924 "Beobachtungen zu einem Experiment über Helligkeitskontrast", *Psychologische Forschung*, 5, 131-42, extracted in Ellis, ed. as "The Influence of Form on Brightness Contrast", 104-108. The influence of contrast upon one part of the field depends not simply upon the kind, amount and proximity of the parts, but also upon figural relations between the given part and its surrounding whole. The experiment stems from Wertheimer.
- Benda, H. v. 1968 "Untersuchungen über die Abhängigkeit der Wahrnehmungsschwelle für komplexe Zeichnungen von den Parametern Zeit, Intensität und Form. I. Theoretischer Teil", *Psychologische Beiträge*, 10, 236-302.
- Bentley, I. M. 1902 "The Psychology of Mental Arrangement", *American Journal of Psychology*, 13, 269-93. Survey and criticism of the early Ehrenfels-Meinong Gestalt tradition; curiously translates 'fundierter Inhalt' as 'funded content' (by analogy with a joint stock fund).
- Benussi, V. 1902 "Über den Einfluß der Farbe auf die Größe der Zöllner'schen Täuschung", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 29, 264-351, 385-433.
- 1904 "Zur Psychologie des Gestalterfassens. (Die Müller-Lyersche Figur)", in Meinong, ed., 303-448. Thorough study of the Müller-Lyer illusion, the source of which Benussi sees in our tendency to the production of higher-order objects. On pp.418ff. he discusses Brentano's contributions (1892 and 1893) to the Müller-Lyer problem.
- 1904a "Ein neuer Beweis für die spezifische Helligkeit der Farben", in Meinong, ed., 473-80.
- 1904b "Ein neuer Beweis für die spezifische Helligkeit (bezw. Dunkelheit) der Farben", in F. Schumann, ed., *Bericht über den 1. Kongreß für experimentelle Psychologie in Giessen, 1904*, Leipzig: Barth, 17-21.
- 1905 "La natura delle cosiddette illusioni ottico-

- geometriche", in S. de Sanctis, ed., *Atti del V Congresso Internazionale di Psicologia*, Rome: Forzani, 262-67.
- 1905a "Gli atteggiamenti intellettivi elementari ed i loro oggetti", in S. de Sanctis, ed., *Atti del V Congresso Internazionale di Psicologia*, Rome: Forzani, 440-45.
- 1906 "Experimentelles über Vorstellungsinadäquatheit. I. Das Erfassen gestaltnmehrdeutiger Komplexe", *Zeitschrift für Psychologie*, 42, 22-55. The notion of presentational inadequacy is introduced by Benussi in order to avoid the ambiguity of the term 'illusion'. The latter can signify either the incorrect judgment or belief associated with an act of perception or the perception itself. Benussi wants to concentrate exclusively on properties of presentations. He shows that presentational inadequacy can be present even without associated false judgments or beliefs, and he shows also that geometrical illusions are not confined to optical phenomena but are to be found also in the tactile and auditory spheres.
- 1906a "Die Psychologie in Italien", *Archiv für die gesamte Psychologie*, 7, 141-80. Survey of Benussi's own work on perception of ambiguous Gestalten and of the work of the Florence School.
- 1907 "Experimentelles über Vorstellungsinadäquatheit. II. Gestaltnmehrdeutigkeit und Inadäquatheitsumkehrung", *Zeitschrift für Psychologie*, 45, 188-230. On the deliberate and non-deliberate production of conflicting Gestalten given constant sensory foundations, and on the degrees of adequacy of the Gestalt presentations which result.
- 1907a "Zur experimentellen Analyse des Zeitvergleichs. I. Zeitgröße und Betonungsgestalt", *Archiv für die gesamte Psychologie*, 9, 366-449.

- 1908 "Zur experimentellen Analyse des Zeitvergleichs. II. Erwartungszeit und subjektive Zeitgröße", *idem*, 13, 71-139.
- 1909 "Über 'Aufmerksamkeitsrichtung' beim Raum- und Zeitvergleich", *Zeitschrift für Psychologie*, 51, 73-107. On the effects on the comparison of spatial and temporal distance of modes of grouping stimulus objects and of variations in colour, size and intensity of boundaries. With implications for the problem of the nature of attention.
- 1910 "Über die Grundlagen des Gewichtseindrucks (Beiträge zur Psychologie des Vergleichens)", *Archiv für die gesamte Psychologie*, 17, 1-185. Study of comparison of impressions of weight:  
 objects such as difference and Gestalt are lacking in reality; as such they are of course incapable of having effects on other real existing things, that is they are incapable of causing anything, and they are also incapable of affecting our sense organs. If, in spite of this, we have knowledge of them, and if we can acquire such knowledge only on the basis of an involvement of presentation, and if, on the other hand, our senses cannot be involved in the occurrence of this presentation, then we are forced to make processes other than sensory ones responsible for the occurrences of such presentations. (p.8)  
 On p. 95 Benussi argues that all relational judgements are judgements of Gestalt: that is, they have an intellectual rather than an intuitive character.
- 1911 "Über die Motive der Scheinkörperlichkeit bei umkehrbaren Zeichnungen", *Archiv für die gesamte Psychologie*, 20, 363-96. Reflects influence of Stumpf, Husserl and the Würzburg school and a gradual move away from Meinong. Perception is conceived by Benussi as a purely presentational activity, involving neither judgemental moments nor moments of belief.
- 1912 "Stroboskopische Scheinbewegungen und geometrisch-optische Gestalttäuschungen", *Archiv für die gesamte Psychologie*, 24, 31-62.

- Benussi, V. (cont.) 1913 *Psychologie der Zeitauffassung*, Heidelberg: Winter. Experimental methods developed in relation to visual phenomena extended to the sphere of temporal experience. See esp. the discussion of temporal analogues of the Müller-Lyer illusion and the discussion of 'foundation ambiguity' (when time intervals are separated by tones, the fact that tones can be grouped together in different ways leads to different sorts of errors in comparison of the lengths of the intervals involved).
- 1913a "Kinematohaptische Erscheinungen (Vorläufige Mitteilung über Scheinbewegungsauffassung auf Grund *haptischer* Eindrücke)", *Archiv für die gesamte Psychologie*, 29, 385-88.
- 1914 Referat über Koffka and Kenkel, "Beiträge zur Psychologie der Gestalt- und Bewegungserlebnisse", *Archiv für die gesamte Psychologie*, 32, 50-57. Review of Kenkel 1913 and of the introduction by Koffka.
- 1914a "Gesetze der inadäquaten Gestaltauffassung. (Die Ergebnisse meiner bisherigen experimentellen Arbeiten zur Analyse der sogen. geometrisch-optischen Täuschungen [Vorstellungen *außersinnlicher* Provenienz])", *Archiv für die gesamte Psychologie*, 32, 396-419. The totality of that which is given via any particular sense organ is not unambiguously determined in the way it will be apprehended by the psychic subject. Hence the process of making determinate what is ambiguous cannot be a sensuous process, which implies the existence of 'presentations of extra-sensory provenance' (p.400). This latter notion replaces the earlier notion of production, which had proved resistant to analysis or clarification.
- 1914b "Die Gestaltwahrnehmungen. Bemerkungen zu den gleichnamigen Untersuchungen K. Bühlers, Bd. I", *Zeitschrift für Psychologie*, 69, 256-92. Review of Bühler 1913. Benussi prefers the term 'Gestalt-presentation' to Bühler's 'Gestalt-perception' since Gestalten 'are after all unactual ideal objects of a higher order'.

- 1914c "Kinematohaptische Scheinbewegungen (KSB) und Auffassungsumformung", in F. Schumann, ed., *Bericht über den 6. Kongreß für experimentelle Psychologie in Göttingen, 1914*, Leipzig: Barth, 31-35 (with discussion 148-51).
- 1914d "Versuche zur Bestimmung der Gestaltzeit", in F. Schumann, ed. *Bericht über den 6. Kongreß für experimentelle Psychologie in Göttingen, 1914*, Leipzig: Barth, 71-73.
- 1914e "Die Atmungssymptome der Lüge", *Archiv für die gesamte Psychologie*, 31, 244-73.
- 1915 "Monokularlokalisationsdifferenz und haplo-skopisch erweckte Scheinbewegungen", *Archiv für die gesamte Psychologie*, 33, 266-72 (with note by Witasek, *ibid.*, p.273).
- 1917 "Versuche zur Analyse taktil erweckter Scheinbewegungen (kinematohaptischer Erscheinungen) nach ihren äußeren Bedingungen und ihren Beziehungen zu den parallelen optischen Phänomenen", *Archiv für die gesamte Psychologie*, 36, 59-135. On the question whether there exist experiences of 'pure' movement. In part a response to Koffka 1915.
- 1918 "Über Scheinbewegungskombination (Lissajoussche S-, M- und E-Scheinbewegungen)", *Archiv für die gesamte Psychologie*, 37, 233-82 (with note, *idem.*, 38, 164).
- 1925 "Recherches expérimentales sur la perception de l'espace. I. La méthode haplodiplo-cinescopique", *Journal de Psychologie normale et pathologique*, 22, 625-66.
- 1925a "La suggestione e l'ipnosi come mezzi di analisi psichica reale", *Rivista di Psicologia*, 21, 1-22. Investigates the possibility of employing hypnosis as an instrument of psychological investigation, carrying forward the ideas and results of Benussi's earlier work on Gestalt. Contains a large number of experimental hypotheses in relation to a range of problems from psycholinguistics to psychology of

perception, hypotheses whose implications have still to be investigated.

- 1927 "Zur experimentellen Grundlegung hypno-suggestiver Methoden psychischer Analyse". *Psychologische Forschung*, 9, 197-274. Summary of Benussi 1925a.
- 1928 "Recherches expérimentales sur la perception de l'espace. II. Le phénomène de Panum". *Journal de Psychologie normale et pathologique*, 25, 465-506.
- Benussi, V. and Liel, W. 1904 "Die verschobene Schachbrettfigur", in Meinong, ed., 449-72.

A complete bibliography of Benussi's writings to 1928 is to be found in Musatti 1928c. Benussi's *Nachlaß* is to be found in the Institute of Psychology of the State University of Milan. See Stucchi 1988.

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- 1952 "The Problem of Relations in Classical Psychology", *Philosophical Quarterly*, 2, 140-52, repr. in *The Metaphysics of Logical Positivism*, 2nd ed., Madison: University of Wisconsin Press, 1967, 277-99.
- 1953 "Theoretical Psychology", *Annual Review of Psychology*, 4, 435-58.

The formula that wholes are more than the sums of their parts has four important good meanings. The first is that... the composition rules of a theory are themselves empirical laws, so that, for instance, the law of the process undergone by two interacting systems cannot be deductively derived from the two laws alone, which describe the processes the two part systems would undergo in isolation. The corresponding bad meaning is the belief, propounded with varying degrees of explicitness and confusion, that there are no composition rules; that every new complexity, or at least some levels of complexity, introduce some ill defined novelty or emergence.

The second good meaning is that every closed system is an instance of dynamic interdependence or interaction. This means that as long as we do not know

the formula for the process of a closed system, we must be prepared to find that the value at a certain moment of *any* of its relevant variables actually depends on the values of *all* these variables at an earlier moment. The corresponding bad meaning is the dogma of total dynamic interdependence, that is, the *a priori* denial of the existence of relative autonomies and of all similar or related features of theories and of the closed systems to which they apply.

The third good meaning is that the adequate description of the state of a system contains, in addition to the adequate descriptions of its subsystems, also the relational statements necessary to determine how the latter 'lie to each other'. The worst thing here is the illusion that only Gestaltists appreciate the point. Newton, as far as I know, did not ignore the distances between the sun and the planets.

The fourth good meaning is best explained by an illustration. Other things being equal, a subject's response *R* to a stimulus *S*<sub>1</sub> presented by itself may be and sometimes is different from the response *R'*, made to *S*<sub>1</sub>, when the latter is presented as part of a pattern, say, simultaneously with *S*<sub>2</sub>, as in color contrast. The point is that *S*<sub>1</sub> itself is the second time exactly what it was the first and that one can nevertheless explain why the second response to it is different from the first. The corresponding bad meaning is, accordingly, the belief that *S*<sub>1</sub> itself has changed merely by becoming part of a whole, this being one of those fabled wholes that determine the nature of their parts. (pp.450f.)

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| Bernfeld, S.        | 1934 | "Die Gestalttheorie", <i>Imago</i> , 20, 32-77.   |
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| Bertini, M.         | 1966 | "Analisi critica delle differenze tra effetto Gibson ed effetto Wertheimer nella percezione delle coordinate spaziali", <i>Rivista di Psicologia</i> , 60, 413-23.  |
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- 1936 "Psychophysiological Systems and Isomorphic Relations", *Psychological Review*, 43, 565-87: 'there seems to be nothing more to isomorphism than the tautology that, since introspection means (is determined by) an antecedent neural system, the meaning of introspection is that neural system' (p.583).
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Brunswik, E. (cont.)

ities, and argues that these cannot be conceived merely as dependent moments of surrounding structures, as the Berlin school would claim. Conceives Gestalten themselves as *moments of experiences*.

1933 "Untersuchungen über Wahrnehmungsgegenstände [E. Brunswik, ed.], I. Die Zugänglichkeit von Gegenständen für die Wahrnehmung und deren quantitative Bestimmung", *Archiv für die gesamte Psychologie*, 88, 377-418. (See also Holaday, Eissler, Klimpfinger.)

1934 *Wahrnehmung und Gegenstandswelt. Grundlegung einer Psychologie vom Gegenstand her*, Leipzig and Vienna: Deuticke, extracted in Hammond, ed., 514-34. Dedicated to his teacher Bühler and influenced by Brentano. Puts forward a psychology of perception oriented towards the object, summarizing results of experiments of object-constancy (*Dingkonstanz*). This goes beyond the Berlin Gestalt psychologists by analysing and describing two types of invariance of structure (two types of transposability) which they ignore: sum-transposability, which relates to the constancy of additive properties of e.g. surfaces and volumes through variations in form; and index-transposability, which relates to those cases where different marks or symptoms of a property can stand in for one another (as e.g. shadows, perspective, colour-distortions, etc. can all serve as significant indices in the perception of distance). Brunswik goes beyond the actualism of the Berlin school to consider not merely relational structures involving actually existing elements but also functional correlations involving virtual elements. He also draws a distinction between casual distance and intentional depth, thereby stressing the double structure of the layered environment of the organism. He criticizes Brentano and Husserl for employing the notion of intentionality in such a way that objective reality is never quite reached.

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 Considering the most characteristic core of problems actually treated by Gestalt psychology in the field of perception, the chief difference as compared with traditional psychophysics lies in the extension of the notation of the stimulus to that of a stimulus pattern... Gestalt psychology [is] still fragmentary insofar as it is, in its most elaborate parts, a psychology from the retina inward, so to speak
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- 1943 "Organismic Achievement and Environmental Probability," *Psychological Review*, 50, 255-72, repr. in Marx, ed., 188-203.
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stimulus situations over a natural ('ecological') array if experiments are not to falsify their subject-matter.

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- 1957 "Scope and Aspects of the Cognitive Problem" in *Contemporary Approaches to Cognition*, Cambridge, Mass.: Harvard University Press, 5-31.
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- 1911 "Ein Verfahren zur Untersuchung des Gedächtnisses für räumliche Beziehungen", in F. Schumann, ed., *Bericht über den 4. Kongreß für experimentelle Psychologie in Innsbruck, 1910*, Leipzig: Barth, 252-55.
- 1913 *Die Gestaltwahrnehmungen: experimentelle Untersuchungen zur psychologischen und ästhetischen Analyse der Raum- und Zeitanschauung*, I (only volume published), Stuttgart: Spemann. Characterization of Gestalt-perception as perception of *proportions*. Böhler begins with a survey of theoretical reflections on Gestalt qualities from Mach and Ehrenfels to Witasek, Benussi and Lipps. There follows a largely experimental treatment of the perception of visual Gestalten such as straightness, curvedness, symmetry, etc. Includes an early presentation of the idea of (psycho-)physical Gestalten.
- 1913a "Über die Vergleichung von Raumgestalten", in F. Schumann, ed., *Bericht über den 5. Kongreß für experimentelle Psychologie in Berlin, 1912*, Leipzig: Barth, 183-85.
- 1922 *Die Erscheinungsweisen der Farben (Handbuch der Psychologie. I. Struktur der Wahrnehmung*, 1), Jena: Fischer.
- 1926 "Die 'Neue Psychologie' Koffkas", *Zeitschrift für Psychologie*, 99, 145-59. Accuses Berlin

Bühler, K. (cont.)

school of being theory blind and of treating Gestalt as a maid-of-all-work.

- 1926a "Die Krise der Psychologie" *Kant-Studien*, 31, 455- 526.
- 1927 *Die Krise der Psychologie*, Jena: Fischer (2nd ed., 1929, repr. Frankfurt: Ullstein, 1978). On the conflict between behaviourism, the psychology of conscious experience ('*Erlebnispsychologie*') and psychology as *Geisteswissenschaft*. Includes statement of Vienna school 'compromise' as between Berlin and Graz Gestalt psychology according to which Gestalten would be accepted as objects of experience alongside elementary sensations. Gestalt ambiguity is resolved not, as on the Graz production theory, by special intellectual processing on the side of the subject. Such ambiguity is resolved rather by dynamical structures in the objective sphere which condition certain effects.
- 1933 *Ausdruckstheorie. Das System an der Geschichte aufgezeigt*, Jena: Fischer, repr. Stuttgart: Fischer, 1964.
- 1933a "Denken", in *Handwörterbuch der Naturwissenschaften*, 2nd ed., Jena, vol. 2, 980-88 (1st ed., 1912). Gestalten as complexes of *Zusammenhangsrelationen*.
- 1933b "L'onomatopée et la fonction représentative du langage", *Journal de Psychologie normale et pathologique*, 30, 1-4 (Numéro exceptionnel), 101-19. Repr. in *Essais sur le langage*, présentés par Jean-Claude Pariente, Paris: Minuit, 1969.
- 1934 *Sprachtheorie. Die Darstellungsfunktion der Sprache*, Jena: Fischer, repr. Stuttgart: Fischer, 1965; 2nd ed. Frankfurt: Klostermann, 1982.
- 1960 *Das Gestaltprinzip im Leben des Menschen und der Tiere*, Bern/Stuttgart: Huber. Collection of short essays and reviews, incl. review of Herrmann 1957.

- 1960a "Christian von Ehrenfels und Albert Einstein", in Weinhandl, ed., 86-91.
- Burkamp, W. 1929 *Die Struktur der Ganzheiten*, Berlin: Junker und Dünnhaupt. Esp. section 7, on Gestalt, intentionality and evidence.
- Burke, L. 1952 "On the Tunnel Effect", *Quarterly Journal of Experimental Psychology*, 4, 121-38, repr. in Michotte *et al.* 1962, 374-406. Observers are presented with two similar objects in successive movement in the same plane in such a way that the end of the first movement and the beginning of the second are hidden by a screen (tunnel). Under proper experimental conditions, the impression received is one of continuous and uniform movement by a single object passing behind the screen. Phenomenal dilation of the time required for completing motion is also experienced.
- Burkhardt, H. 1925 *Zum Problem der Ganzheit. Ein Beitrag zur Theorie des Psychischen*, Dissertation, Leipzig; inspired by F. Krueger. Distinguishes three theories of the way in which psychic wholeness arises: (i) production theories (Graz school, Schumann, G. E. Müller's attention theory); (ii) physical theories (Berlin school); (iii) psychical theories (Driesch, Leipzig school). According to (iii), psychical wholeness is a reflection of the mind or soul; mental totalities manifest a *sui generis* and inexplicable qualitative peculiarity.
- 1934 "Theoretisches zur Gestaltproblematik", *Archiv für die gesamte Psychologie*, 91, 490-506.
- 1934a "Theoretisches zur Gestaltproblematik", in O. Klemm, ed., *Bericht über den 13. Kongreß der Deutschen Gesellschaft für Psychologie in Leipzig, 1933*, Jena: Fischer, 123-25.
- Burmester, L. 1906/09 "Theorie der geometrisch-optischen Gestalt-täuschungen", *Zeitschrift für Psychologie*, 41, 321-48, 50, 219-74. Elaborate geometrical treatment of relief and perspective and of the illusion of three-dimensionality awakened by two-dimensional figures.

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Burton, A. 1978 "The Whole Idea: Gestalt Psychology", in A. Burton and J. Radford, eds., *Thinking in Perspective*, London: Methuen, 23-43.
- Calkins, M. W. 1926 "Critical Comments on the 'Gestalttheorie'", *Psychological Review*, 33, 135-58. Criticizes the inadequacy of Wertheimer-Köhler-Koffka Gestalt psychology to emotional and volitional phenomena, its confusion of analysis with atomism, and its neglect of the conscious subject and of self-knowledge. Calkins points to anticipations of Gestalt theory in the work of William James.
- Canestrari, R. 1975 "A Further Study of the Phenomenon of the 'Rotating Trapezoidal Window'", in Flores d'Arcais, ed., 157-65. Criticizes cognitive explanations of the Ames illusion (i.e. explanations in terms of unconscious inferences on the basis of past experiences), pointing out that the same phenomenon can be obtained in relation to rotating elements void of any prior significance. See also Bosinelli, *et al.*
- Čapek, M. 1964 "Simple Location and Fragmentation of Reality", *The Monist*, 48, 195-218. The Gestalt theorists' rejection of the constancy hypothesis is compared to the rejection of the fallacy of simple location in physics.
- Cappellina, A. see Gemelli and Cappellina.
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- Carpenter, P. 1965 "Musical Form Regained", *Journal of Philosophy*, 64, 36-47. Music as temporal Gestalt.
- Case, C. M. 1930 "Toward Gestalt Sociology", *Sociology and Social Research*, 15, 3-27.
- Cassirer, E. 1910 *Substanzbegriff und Funktionsbegriff*, Berlin: 3rd ed., Darmstadt: Wissenschaftliche Buch-

- gesellschaft, 1969, Eng. trans. as *Substance and Function*, New York: Dover, 1953. The final section (ch. 8 "Zur Psychologie der Relationen") has a commentary on the Graz school (pp.433ff.).
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- Chou, S. K. 1930 "Gestalt in Reading Chinese Characters", *Psychological Review*, 37, 54-70.
- Christie, W. M. 1981 "Towards a Gestalt Phonology", *Language and Communication*, 1, 67-72. Inspired by K. Pike.
- Chu, H. L. 1963 "Critical Comments on Gestalt Psychology", *Psychologia*, 6, 53-58.
- Clayton, T. see Rock, Halper and Clayton.
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- 1900 "Über 'Gestaltqualitäten'", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 22, 101-21. Defends a Humean treatment of the recognition of similarity of contents. Because certain complex contents may manifest similarity even despite the lack of any similarity-relations among their parts, we are led to postulate new characters called 'Gestaltqualitäten' (p.113). But where for Ehrenfels irreducible similarity of complexes is an argument for the existence of Gestalt qualities, for Cornelius our talk of Gestalt qualities is merely a roundabout way of referring to such similarity (p.115). Attempts to reduce Gestalt qualities to relations or to feelings (cf. Mach) are mistaken, since both relations and feelings are themselves varieties of Gestalt qualities (116ff.)
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- 1906 "Psychologische Prinzipienfragen. I", *Zeitschrift für Psychologie*, 42, 401-13. Defends the view that what is immediately given in consciousness is a flow or stream, that Gestalt qualities are a reflection of the gradual organization of this flow in time.
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- 1921 "Hans Cornelius. Leben und Lehre", in R. Schmidt, ed., *Philosophie der Gegenwart in*

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- Crabbé, G. 1962 "Rivalité entre différents types d'organisation structurale de causalité perceptive", in Michotte *et al.*, 259-74. See also Michotte, Thinnès and Crabbé.
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- Deregowski, J. B. 1971 "Symmetry, Gestalt, and Information Theory", *Quarterly Journal of Experimental Psychology*, 23, 381-85. See also Wing and Deregowski.
- De Rivera, J., ed. 1976 *Field Theory as Human-Science: Contributions of Lewin's Berlin Group*, New York: Gardner Press. Includes translations of Dembo 1931, Karsten 1928, and Ovsiankina 1928, with extended commentary.
- DeSilva, H. 1926 "An Experimental Investigation of the Determinants of Apparent Visual Movement", *American Journal of Psychology*, 37, 469-501.
- 1929 "An Analysis of the Visual Perception of Movement", *British Journal of Psychology*, 19, 269-305.
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- Dinnerstein, D. see Köhler and Dinnerstein.
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- 1926 "Kritisches zur Ganzheitslehre", *Annalen der Philosophie*, 5, 281-304.
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- 1929 "Über induzierte Bewegung (Ein Beitrag zur Theorie optisch wahrgenommener Bewegung)", *Psychologische Forschung*, 12, 180-259, extracted in Ellis, ed. as "Induced Motion", 161-72. How is it possible that stationary objects are usually seen as stationary even when our eyes are moving? How is it possible that the spatio-temporal distribution of stimuli on the retina yields both the perception of an external world and the perception of the state of motion of the perceiver? (A question later considered by J.J.Gibson.) The 'induced motion' of the title is the phenomenon which occurs e.g. when one is sitting in a railway carriage and a nearby train moves off, so that it seems for a time as if one's own train were moving in the opposite direction. This phenomenon shows that the things upon which one's regard is directed supply a system of reference for visual space into which the moving glance is inserted.
- 1932/33 "Behaviorismus und Gestaltpsychologie. Kritische Bemerkungen zu Carnaps 'Psychologie in physikalischer Sprache'", *Erkenntnis*, 3, 162-76. See Carnap 1932/33.
- 1935 *Zur Psychologie des produktiven Denkens*, Berlin: Springer, repr. 1963, Eng. trans., "On Productive Thinking", *Psychological Monographs*, 1945, 58/5. Definitive Gestalt-theoretical study of problem-solving. Criticizes assumption that the relation between founding and founded contents implies a genetic priority of the former, and shows how the proper establishing of the dependence and derivation relations and of the relative weights of the various factors involved in a given structure is crucial both to creative thinking and to proving and inferring. Includes an affirmation of the Husserlian theory of the material *a priori*:

...we do not reduce the synthetic *a priori* to prescriptions of reason [*Verordnungen*] invested in the object, but conceive this *a priori* as intrinsic in the nature of the objects themselves. (Eng. trans., p.55)

- 1937 "Some Preliminary Experiments on the Mutual Influence of Pains", *Psychologische Forschung*, 21, 311-26.
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- 1924 "Über Wechselwirkung zwischen farbigen und neutralen Feldern. Forschungsbericht", *Psychologische Forschung*, 5, 143-70.

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- 1884 *Größenrelationen und Zahlen. Eine psychologische Studie*, (Dissertation, Graz). On presentations of relations of number and magnitude (similarity, comparison, relations of more and less).
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- 1891 "Zur Philosophie der Mathematik", *Vierteljahrsschrift für wissenschaftliche Philosophie*, 15, 285-347.
- 1916 *Kosmogonie*, Jena: Diederichs. Eng. trans. by M. Focht as *Cosmogony*. New York: Comet, 1948. Includes a remarkable typology of static and dynamic Gestalten from both the physical and the psychological spheres, so anticipating Köhler 1920.
- 1916a "Höhe und Reinheit der Gestalt", in Ehrenfels 1916, 93-96 (trans. 95-98), repr. in Weinhandl, ed., 44-46. English translation in this volume.
- 1922 *Das Primzahlengesetz, entwickelt und dargestellt auf Grund der Gestalttheorie*. Leipzig: O.R. Reiland. Contains an application of Gestalt-theoretical ideas to the understanding of the nature of abstract mathematical objects. See Simons 1986.
- 1922a "Weiterführende Bemerkungen", in Ehrenfels 1922, 95-112, and repr. in Weinhandl, ed., 47-60. Considers five difficulties raised by the theory of Gestalt-qualities: 1. How is it possible, given the radical heterogeneity between tones and the 'determinations of place' which provide the foundation for a spatial shape [*Raumgestalt*], to employ for both the same concept of Gestalt? 2. Is it possible that the foundation for a Gestalt quality should be given in consciousness without the Gestalt quality itself, as the production theorists claim? 3. What is to be said about the constituent part-melodies

which would seem to be involved whenever we hear a whole-melody? 4. How is the difference between Gestalt quality and relation strictly to be characterized? Via the intuitive character of the former? 5. Are Gestalt qualities real entities, existing also outside our presentations? And if Gestalt qualities exist in time, when, precisely, would the melody exist, which is made up of these presently sounding tones.

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- 1934 *Einführung in die Ganzheitspsychologie*, Leipzig: Barth.
- 1935 *Zur Grundlegung einer ganzheitspsychologischen Typenlehre*, Berlin: Junker und Dünnhaupt.
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- 1942 *Beiträge zur ganzheitspsychologischen Wahrnehmungslehre*, Leipzig: Barth; revised and extended edition as *Probleme der ganzheitspsychologischen Wahrnehmungslehre*, Leipzig: Barth, 1947; 3rd ed., 1954. Especially ch.1 on the fundamental concepts of the *Ganzheitspsychologie*.
- 1960 "Christian von Ehrenfels' Kriterium der Gestalthöhe" in Weinhandl, ed., 121-31. 'That the quality *fitting to the whole* [zum Ganzen *passend*] should impress itself on one is the decisive foundation of aesthetic appreciation.'
- 1983 "Über die Bedeutung von Leibniz' Psychologie der Gestalt und Ganzheitspsychologie" (Lecture, first delivered in 1946), *Gestalt Theory*, 5, 77-82.
- Ehses, H. and Wiesenforth, G. 1972 *Gestaltseinheit und Gestalthöhe. Überlegungen zu G. D. Birkhoff und Chr. v. Ehrenfels innerhalb einer exakten Ästhetik*, Ulm: Institut für Umweltplanung.
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- 1938 "Gestalttheorie, Gestaltpsychologie und Typologie. II: Das Vorgestalterlebnis unter

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- 1933    "Untersuchungen über Wahrnehmungsgegenstände [ed. by E. Brunswik], III. Die Gestaltkonstanz der Sehdinge bei Variation der Objekte und ihrer Einwirkungsweise auf den Wahrnehmenden", *Archiv für die gesamte Psychologie*, 88, 487-550.
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- 1938    *A Source Book of Gestalt Psychology*, with an introduction by K. Koffka, London: Kegan Paul, Trench, Trubner (New York: Harcourt, Brace, 1939); repr. 1950, 1955. Collection of extract translations of important early Berlin school writings.
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Intellectual knowledge and discursive insight play no role in colour perception which is a primitive, relatively autonomous system. On the importance of the depth articulation resulting from the organization of the visual field and the changes in colour caused thereby. Expansion of Fieandt 1936, on the basis of experiments carried out in Vienna.

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- 1911 "Über das Wesen und die Bedeutung der Einfühlung", in F. Schumann, ed., *Bericht über den 4. Kongreß für experimentelle Psychologie in Innsbruck, 1910*, Leipzig: Barth, 29-73.
- Gelb, A. 1911 "Theoretisches über 'Gestaltqualitäten'", *Zeitschrift für Psychologie*, 58, 1-59. Study from

the Institute of Psychology in Berlin of early work on Gestalt qualities from Ehrenfels to Lipps, Marty and Stumpf, with special reference to the Graz production theory and to the question whether a specific mental exertion is necessary for the apprehension of Gestalt qualities (e.g. of relations of identity and difference). Gelb argues in particular that the relations between elements must belong to the foundation of a Gestalt, in addition to the elements themselves: (a) because relations too can have the force of stimuli; (b) because such a view explains how transposability is possible. From this it follows that Gestalt qualities cannot themselves be relations but something *sui generis*, for a Gestalt such as a melody would otherwise be not a unity but a multiplicity. Cf. Pupp 1932.

- 1914 "Versuche auf dem Gebiet der Zeit- und Raumanschauung", in F. Schumann, ed., *Bericht über den 6. Kongreß für experimentelle Psychologie in Göttingen, 1914*, Leipzig: Barth, 36-42. The tendency to good Gestalt draws attention to itself in the fact that, in certain conditions, Gestalt 'improvements' are in actuality deteriorations, since they hinder our perception of what is really there. Thus for example when three successive points of light are given at equal spatial distances but unequal temporal distances, there is a tendency for the experienced temporal distances to even out.
- 1922 "Grundfragen der Wahrnehmungspsychologie", in K. Bühler, ed., *Bericht über den 7. Kongreß für experimentelle Psychologie in Marburg 1921*, Jena: Fischer, 114-16. On brightness effects.
- 1929 "Die 'Farbenkonstanz' der Sehdinge", *Handbuch der normalen und pathologischen Physiologie*, A. Bethe, et al., eds., 12/1, 594-677, Berlin: Springer, extracted in Ellis, ed., as "Colour Constancy", 196-209. Thorough survey of literature on colour constancy (on the reasons why white paper is seen as white whether seen in daylight or in moonlight).

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- 1925 "Zur Frage nach der gegenseitigen funktionellen Beziehung der geschädigten und ungeschädigten Sehsphäre bei Hemianopie. Psychologische Analyse hirnpathologischer Fälle. XI", *Psychologische Forschung*, 6, 187-214.
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- 1928a "Sulla influenza reciproca della forma e del colore nella percezione degli oggetti", in *Atti del VI Convegno della Società Italiana di Psicologia*, Bologna: Stabilimenti Poligrafici Riuniti, 22-29 and in *Rivista di Psicologia*, 24, 1928, 6-13.
- 1935 "Neue Beobachtungen über das Wesen der Wahrnehmung", *Acta Psychologica*, 1, 83-98.
- 1951 "The Effect of Illusory Perception of Movement on Sound Localization", in *Essays in Psychology Dedicated to David Katz*, Uppsala: Almqvist and Wiksell, 104-16.
- 1958 "The Visual Perception of Movement", *American Journal of Psychology*, 71, 291-97. Experiments along the lines of Michotte, but with special attention to subjects' attitudes.
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- Gemelli, A. and Pastori, G. 1933 "Elektrische Analyse der Sprache. II. Untersuchungen über die Gestaltung der Wörter und Phrasen", *Psychologische Forschung*, 18, 191-217.
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- Gibson, J. J. 1929 "The Reproduction of Visually Perceived Forms", *Journal of Experimental Psychology*, 12, 1-39. On experienced tendencies to complete visual forms by closing or reducing gaps. Development of Wulf 1922.
- 1933 "Adaptation, After-Effect and Contrast in the Perception of Curved Lines", *Journal of Experimental Psychology*, 16, 1-31. Discovery of figural after-effects, i.e. the phenomenon according to which certain visual patterns, after prolonged observation, are changed, and other figures afterwards presented in the same region are also altered.
- 1937 "Adaptation, After-Effect, and Contrast in the Perception of Tilted Lines. II: Simultaneous Contrast and the Areal Restriction of the After-Effect", *Journal of Experimental Psychology*, 20, 553-69.
- 1937a "Adaptation with Negative After-Effect", *Psychological Review*, 44, 222-44.
- 1941 "A Critical Review of the Concept of Set in Contemporary Experimental Psychology", *Psychological Bulletin*, 38, 781-817.
- 1941a "Visual Organization in Relation to Camouflage", in W. S. Fernberger, ed., *Perception (Psychological Bulletin, 38)*, 432-68.
- 1950 *The Perception of the Visual World*, Boston: Houghton- Mifflin. Examination of perception

in natural situations suggests that there is a much greater agreement in how people see the world than psychologists have generally supposed. Gibson defends a causal theory of perception as a means of guaranteeing the correctness of our perceptions in ordinary circumstances.

- 1951 "What is a Form?", *Psychological Review*, 58, 403-12, repr. in Gibson 1982, 303-16. Distinguishes various meanings of 'form' in relation to perceived objects; opposes solid and surface forms, which are real, to outline forms, pictorial, plan, and perspective forms, which are representations only.
- 1954 "The Visual Perception of Objective Motion and Subjective Movement", *Psychological Review*, 61, 304-14.
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- 1957 "Survival in a World of Probable Objects", *Contemporary Psychology*, 2, 33-5. Review of Brunswik 1956.
- 1960 "The Registering of Objective Facts: An Interpretation of Woodworth's Theory of Perceiving", in G. S. Seward and J. P. Seward, eds., *Current Psychological Issues. Essays in Honor of Robert S. Woodworth*, New York: Holt, London: Methuen, 39-52.
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objects and events, and for the simple-minded conviction that our senses give knowledge of it' (p.168).

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- 1971 "The Legacies of Koffka's *Principles*", *Journal of the History of the Behavioral Sciences*, 7, 3-9.
- 1971a "The Information Available in Pictures", *Leonardo*, 4, 27-35, repr. in Gibson 1982, 269-83.
- 1979 *The Ecological Approach to Visual Perception*, Boston: Houghton-Mifflin.
- 1982 *Reasons for Realism. Selected Essays of James J. Gibson*, E. Reed and R. Jones, eds., Hillsdale, N.J.: Erlbaum. Includes complete bibliography of Gibson to 1981 (pp. 431-36).
- 1982a "A History of the Ideas behind Ecological Optics: Introductory Remarks at the Workshop on Ecological Optics" (Lecture of 1970), first publ. in Gibson 1982, 90-101. Includes discussion of difficulties in Gestalt theory which ecological optics was designed to solve.
- Gibson, J.J. and Radner, M. 1937 "Adaptation, After-Effect and Contrast in the Perception of Tilted Lines. I: Quantitative Studies", *Journal of Experimental Psychology*, 20, 453-67.
- Giese, F. 1915 "Ein Versuch über Gestaltgedächtnis", *Zeitschrift für pädagogische Psychologie*, 16, 127-31.
- 1932 "Gestalt und Form", in G. Kafka, ed., *Bericht über den 12. Kongreß der Deutschen Gesellschaft für Psychologie in Hamburg 1931*, Jena: Fischer, 335-36.
- Gilchrist, A. see Rock and Gilchrist.



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- Gillin, J. 1968 "The Configuration Problem in Culture", *American Sociological Review*, 1, 373-86.
- Ginsburg, A. 1984 "Visual Form Perception based on Biological Filtering", in Spillman and Wooten, eds., 53-72.
- Gloy, K. 1981 *Einheit und Mannigfaltigkeit. Eine Struktur-analyse des "und". Systematische Untersuchungen zum Einheits- und Mannigfaltigkeitsbegriff bei Platon, Fichte, Hegel sowie in der Moderne*, Berlin: de Gruyter.
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- 1940 "Psicopatologia della percezione della forma. Principio della forma nei disegni malati mentali", *Archivio di Psicologia, Neurologia, Psichiatria e Psicoterapia*, 1, 603-65.
- Gneisse, K. 1922 "Die Entstehung der Gestaltvorstellungen, unter besonderer Berücksichtigung neuerer Untersuchungen von kriegsbeschädigten Seelenblinden", *Archiv für die gesamte Psychologie*, 42, 295-334. Experiments on brain-damaged subjects are interpreted as a proof of the Graz production theory of Gestalt-presentation as opposed to the theories of Wertheimer and Linke.
- Glynn, A. 1954 "Apparent Transparency and the Tunnel Effect", *Quarterly Journal of Experimental Psychology*, 6, 125-39, repr. in Michotte, et al. 1962, 407-432. The tunnel phenomenon may occasionally give rise to the apparent transparency of the opaque screen producing it.
- Gobar, A. 1968 *Philosophic Foundations of Genetic Psychology and Gestalt Psychology*, The Hague: Nijhoff. An account of an empirically inclined Gestalt

psychology and of the Piaget school as the two main rivals of American behaviourism.

- Godwin, D. B. 1965 "Bode, Dewey and Gestalt Psychology", *Educational Theory*, 15, 169-87.
- Goldmeier, E. 1937 "Über Ähnlichkeit bei gesehenen Figuren", *Psychologische Forschung*, 21, 146-208. By student of Wertheimer. Perceived similarity is not simply a matter of agreement of parts nor of relations between parts. It depends much rather upon a grasp of Gestalt properties of perceived stimuli, for example their tendency to completion or closure. This view explains for example how similarity can be perceived even through certain kinds of deformations and transformations (as e.g. in caricature).
- 1941 "Progressive Changes in Memory Traces", *American Journal of Psychology*, 54, 490-503.
- 1972 *Similarity in Visually Perceived Forms*, New York: International Universities Press. Expanded version of Goldmeier 1937 with a foreword by I. Rock. In an additional chapter on similarity spaces, Goldmeier argues that certain dimensions of a similarity space may admit of only a small number of discrete values.
- 1982 *The Memory Trace: Its Formation and its Fate*, Hillsdale, N.J.: Erlbaum.
- Goldschmidt, R. 1923 "Größenschwankungen gestaltfester, urbildverwandter Nachbilder, mit Bemerkungen zur Logik der experimental-deskriptiven Psychologie", *Archiv für die gesamte Psychologie*, 44, 51-131.
- Goldstein, K. 1927 "Die Lokalisation in der Großhirnrinde" in *Handbuch der normalen und pathologischen Physiologie*, A. Bethe, ed., 10, 600-842.
- 1934 *Der Aufbau des Organismus. Einführung in die Biologie unter besonderer Berücksichtigung der Erfahrungen am kranken Menschen*, The Hague: Nijhoff; Eng. trans. as *The Organism*. A

*Holistic Approach to Biology Derived from Pathological Data in Man*, with a Forward by K. S. Lashley, New York: American Book Co., 1939. Especially ch.8 on physical Gestalten. Whilst sharing in common with the Berlin Gestalt psychologists a holistic methodology, Goldstein criticizes the latter for concentrating too narrowly on certain partial aspects of experience and neglecting the organism as a whole:

The Gestalten which are given in perception through one sensory organ are Gestalten which belong to a very definite condition of the organism, namely to an isolated stimulus utilization in one part, while the rest of the organism is artificially kept relatively constant. (Eng. trans. p.374)

Thus Goldstein sees e.g. the tendency to good Gestalt as a 'tendency to the preferred and most suitable behavior of the whole organism in specific situations' (p.380). See also Gelb and Goldstein.

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|-----------------|---------|---|
| Gomperz, H.     | 1905/08 | <i>Weltanschauungslehre</i> , vols. I and II/1 (only volumes published), Jena and Leipzig: Diederichs. See e.g. II/1, pp.106ff.   |
| Goodman, N.     | 1978    | <i>Ways of World-Making</i> , Hassocks: Harvester Press. See the discussion of Kolers on the perception of motion (ch.5).   |
| Gottschaldt, K. | 1926    | "Über den Einfluß der Erfahrung auf die Wahrnehmung von Figuren, I. Über den Einfluß gehäufte Einprägung von Figuren auf ihre Sichtbarkeit in umfassenden Konfigurationen", <i>Psychologische Forschung</i> , 8, 261-317 (Dissertation, Berlin), extracted in Ellis, ed., as "Gestalt Factors and Repetition", 109-122, excerpted in M. D. Vernon, ed., <i>Experiments in Visual Perception. Selected Readings</i> , Harmondsworth: Penguin, 1966, 24-44. By a pupil of Köhler, Wertheimer and Lewin. On the role of past experience in affecting the capacity to detect hidden (geometrical) figures. Gottschaldt shows that frequency of earlier presentation is practically without influence. Modification of the |

experimental procedure in such a way as to give rise to an active rather than a passive attitude of the subject is of much greater significance. The paper includes a discussion of the phenomenal characteristics of 'internal unity' in general (i.e. of the question: what is it to perceive something *in* something else?).

- 1929 "Über den Einfluß der Erfahrung auf die Wahrnehmung von Figuren, II. Vergleichende Untersuchung über die Wirkung figuraler Einprägung und den Einfluß spezifischer Geschehensverläufe auf die Auffassung optischer Komplexe", *Psychologische Forschung*, 12, 1-87, extracted in Ellis, ed., 123-35. Repeats the investigations of part I, which involved cases of high figural cohesion, in regard to cases where internal cohesion is lower. Again shows that the idea that there are automatic lasting effects of earlier experience has to be rejected.
- Gowin, D.B. 1954 *A Critique of the Compatibility of Gestalt-Theorie with Experimentalism*, (Dissertation, Yale).
- Granit, A. R. 1921 "A Study on the Perception of Form", *British Journal of Psychology*, 12, 223-47. See also Gelb and Granit.
- Graßl, W. and Smith, B. 1986 "A Theory of Austria", in J. C. Nyíri, ed., *From Bolzano to Wittgenstein. The Tradition of Austrian Philosophy*, Vienna: Hölder-Pichler-Tempsky, 11-30. On Gestalt theory as a basis for a theory of the supranational state.
- Graumann, C.-F. 1960 *Grundlagen einer Phänomenologie und Psychologie der Perspektivität*, Berlin: De Gruyter.
- Graumann, C.-F. ed. 1985 *Psychologie im Nationalsozialismus*, Berlin/Heidelberg/New York/Tokyo: Springer.
- Green, R. T. and Courtis, M. C. 1966 "Information Theory and Figure Perception: The Metaphor that Failed", *Acta Psychologica*, 25, 12-36. Especially on the work of Attneave.
- Gregg, F.M. 1932 "Materializing the Ghost of Köhler's Gestalt Psychology", *Psychological Review*, 39, 257-70.

- Motor-theoretic interpretation of Gestalt theory. Cf. Washburn 1926.
- Gregory, R. L. 1971 "Cognitive Contours", *Nature*, 238, 51-52. See also Harris and Gregory.
- Grelling, K. 1936 "Zur Theorie der Wahrnehmung", *Actes du congrès international de philosophie scientifique* (Paris, 1935). V. *Logique et expérience*, Paris: Actualité scientifiques et industrielles, 69-79.
- 1939 "A Logical Theory of Dependence", preprinted for the members of the 5th International Congress for the Unity of Science, Cambridge, Mass., (scheduled to appear in *Erkenntnis*, 9, 37-45). In this volume 218-27.
- 1975 "1. Main Part: 'Melody as Gestalt'", *Methodology and Science*, 8, 13-23 (edited translation by A.S. and E.H. Luchins). See also Luchins and Luchins 1975, and Cellum and Luchins. Mainly a treatment of the ideas put forward by Ehrenfels in his paper of 1890.
- Grelling, K. and Oppenheim, P. 1937/38 "Der Gestaltbegriff im Lichte der neuen Logik", *Erkenntnis*, 7, 211-25; Eng. trans. in this volume, 192-206.
- 1937/38a "Supplementary Remarks on the Concept of Gestalt", *Erkenntnis*, 7, 357-59; in this volume, 207-10.
- 1939 "Logical Analysis of 'Gestalt' as 'functional whole'", preprinted for the members of the 5th International Congress for the Unity of Science, Cambridge, Mass., 1939 (scheduled to appear in *Erkenntnis*, 9, 70-76). In this volume, 211-17.
- 1939a "Concerning the Structure of Wholes", *Philosophy of Science*, 6, 487-8 (comment to Angyal 1939).
- Groeben, N. 1975 "Gestalttheorie als Irrationalismusbasis? Das Bild des 'gestalt switch' und irrationalistische Tendenzen in der neueren Wissenschaftstheorie", in Ertel, *et al.*, eds., 134-45. The irrationalism of Kuhn etc. 'arises through a sub-optimal application of Gestalt theory'. It

consists 'in the naive transfer of a model taken specifically from perceptual psychology to an object domain that is specifically cognitive' (p.139). Groeben considers the possibility of employing the Gestalt theory of productive thinking and other, related approaches for the development of a more adequate psychology of science.

- Groffmann, K. J. 1981 *Leben und Werk von Otto Selz. 1881-1943. Zum 100. Geburtstag des Psychologen*. Mannheim: Otto Selz Institut.
- Grossmann, R. 1974 *Meinong*, London: Routledge and Kegan Paul.
- 1977 "Structures versus Sets: The Philosophical Background of Gestalt Psychology", *Crítica. Revista Hispanoamericana de Filosofía*, 9, 3-21. Structures are identical if and only if (a) their non-relational parts are identical, (b) their relational parts are identical, and (c) the non-relational parts stand in the same relations to each other. Parts of structures thus have relational properties which they would not have in isolation. Includes a somewhat one-sided criticism of Stumpf's account of co-variation.
- 1983 *The Categorical Structure of the World*, Bloomington: Indiana University Press. Includes a treatment of Gestalt along the lines of "Structures versus Sets".
- Grubissa, B. see Kanizsa and Grubissa.
- Grünbaum, A. 1908 "Über die Abstraktion der Gleichheit", *Archiv für die gesamte Psychologie*, 12, 340-478. Würzburg experiments, in part inspired by Husserl.
- Grünhaut, L. 1929 "Über Gestalttheorie und Gestaltpsychologie", in E. R. Jaensch and L. Grünhaut, *Über Gestalttheorie und Gestaltpsychologie*, Langensalza: Beyer, 55-67. Critique of Köhler's theory of physical Gestalten. Imputes to Berlin Gestalt psychology the psychophysical doctrine that all mental phenomena are to be explained on the basis of known physical laws.

- Guilford, J. P. 1974 "A Psychology with Act, Content and Form", *Journal of Genetic Psychology*, 90, 87-100.
- Guilford, J. P. and Helson, H. 1929 "Eye-movements and the phi-phenomenon", *American Journal of Psychology*, 41, 595-606.
- Guillaume, P. 1925 "La psychologie de la forme", *Journal de Psychologie normale et pathologique*, 22, 768-800.
- 1937 *La psychologie de la forme*, Paris: Flammarion, 2nd ed. 1959. Useful survey.
- 1947 "Peut-on décrire un phénomène?" in *Miscellanea Psychologica Albert Michotte*, Louvain: Editions de l'Institut Supérieur de Philosophie, 1-12. Phenomenal causality is experienced to the same degree whether subjects are asked to concentrate exclusively on what is given phenomenally or on the physical cause of the events perceived. In both cases the responses are determined by the temporal interrelationships of the perceived events.
- Gulick, W. L. see Smith, W. M. and Gulick.
- Gurba, K. 1985 "Is Leon Chwistek a Precursor of Gestalt Psychology and Frame Theory" (in Polish), *Proceedings of the XXIst Conference on the History of Logic*, Cracow.
- Gurwitsch, A. 1929 "Phänomenologie der Thematik und des reinen Ich. Studien über Beziehungen von Gestalttheorie und Phänomenologie", *Psychologische Forschung*, 12, 279-381. (Dissertation, Göttingen); Eng. trans. as "Phenomenology of Thematics and of the Pure Ego: Studies of the Relation between Gestalt Theory and Phenomenology", in Gurwitsch, 1966, 175-286. Historically important comparison; see esp. the discussion of Husserl's notion of horizon and of the relation theme/thematic field (a generalization of the relation of figure/ground). See also the distinction between two sorts of Gestalt-connection (i) between theme and associated thematic field, (ii) within a single object or Gestalt serving as theme. Argues that the Gestaltists' rejection of the constancy

hypothesis yields a position close to phenomenology, since it implies the necessity of studying 'the phenomena themselves', independently of their objective conditions.

- 1935 "Développement historique de la Gestalt-psychologie", *Thalès*, 2, 167-76.
- 1936 "Quelques aspects et quelques développements de la psychologie de la form", *Journal de Psychologie normale et pathologique*, 33, 413-70. Eng. trans. as "Some Aspects of the Development of Gestalt Psychology" in Gurwitsch 1966, 3-55.
- 1955 "The Phenomenological and the Psychological Approach to Consciousness", *Philosophy and Phenomenological Research*, 15, 303-19, and in Gurwitsch 1966, 89-106. On Gestalt theory and the Husserlian concept of noema: the percept, as it is conceived after the constancy hypothesis has been dismissed, is just the noema, the *perceptum qua perceptum*.
- 1957 *Théorie du champ de la conscience*, Bruges: Brouwer; Eng. trans. *The Field of Consciousness*, Pittsburgh: Duquesne, 1964; German trans., *Das Bewußtseinsfeld*, Berlin: de Gruyter, 1974. Valuable treatment of the work of James, Husserl and the Graz and Berlin schools.
- 1959 "Beiträge zur phänomenologischen Theorie der Wahrnehmung", *Zeitschrift für philosophische Forschung*, 13, 419-37, Eng. trans. in Gurwitsch 1966, 332-49.
- 1965 "The Phenomenology of Perception: Perceptual Implications", in J. M. Edie, ed., *An Invitation to Phenomenology*, Chicago: Quadrangle Books, 17-30.
- 1966 *Studies in Phenomenology and Psychology*, Evanston: Northwestern University Press.
- Hallett, W. N. 1933 "A Psychophysical Study of Visual Gestalten", *American Journal of Psychology*, 45, 691-713.
- Halper, F. see Rock, Halper and Clayton.



- Halpern, D. F. 1981 "The Determinants of Illusory-Contour Perception", *Perception*, 10, 191-213.
- Hamburger, R. 1927 *Neue Theorie der Wahrnehmung und des Denkens*, Berlin: Stilke. Attempts to develop an account of the nature and role of phenomenal Gestalten on the basis of a Machian theory of minimal exertion of psychic energy.
- Hamlyn, D. W. 1951 "Psychological Explanation and the Gestalt Hypothesis", *Mind*, 60, 506-20.
- 1957 *The Psychology of Perception. A Philosophical Examination of Gestalt Theory and Derivative Theories of Perception*, London: Routledge and Kegan Paul. Criticizes Gestalt theory, including the work of Michotte and Gibson, for confusing conceptual and empirical claims. Hamlyn stresses the role in perception of learned classificatory abilities and of cultural and social factors generally, concluding with a discussion of uses of 'seeing as'.
- Hammond, K. R. 1951 "Relativity and Representativeness", *Philosophy of Science*, 18, 208-11. On the revolutionary implications of Brunswik 1947.
- Hammond, K. R. ed. 1966 *The Psychology of Egon Brunswik*, New York: Holt, Rinehart and Winston.
- Hänsel, L. 1960 "Der Gegenstand des Begriffs und die Logik", in Weinhandl, ed., 160-77. Objects as apprehended through concepts are Gestalten (or founded objects in Meinong's sense). Wittgenstein-influenced study of Meinongian ideas.
- Harris, J.P. and Gregory, R. L. 1973 "Fusion and Rivalry of Illusory Contours", *Perception*, 2, 235-47.
- Harrower, M.R. 1928 "Gestalt versus Associationism", *Psyche* (London), 9, 55-71. Summary of the Köhler-Rignano debate and defence of Köhler.
- 1930 "Beiträge zur Psychologie der Gestalt [K.Koffka, ed.], XVIII: Some Experiments on the Nature of Gamma-Movement", *Psychologische Forschung*, 13, 55-63.

- 1932 "Organization in Higher Mental Processes", *Psychologische Forschung*, 17, 56-120. Study of Gestalt properties of jokes and related material. Argues that phenomena of segregation and integration, strong and weak Gestalten and various types of closure are present also in nonperceptual consciousness. Structural properties are shown to be conducive to memory.
- 1936 "Some Factors Determining Figure-Ground Articulation", *British Journal of Psychology*, 26, 407-24.
- 1971 "A Note on the Koffka Papers", *Journal of the History of the Behavioral Sciences*, 7, 141-53, repr. in Harrower 1983, 263-75.
- 1983 *Kurt Koffka. An Unwitting Self-Portrait*. Gainesville: University of Florida Press. Contains extensive extracts from the Koffka-Harrower correspondence between 1928 and 1941, with appendices, relating esp. to Koffka's work on his *Principles* of 1935. See also Koffka and Harrower.
- Hartkopf, W. 1958 *Die Strukturformen der Probleme. Zur Grundlegung einer allgemeinen Methodentheorie der Problembearbeitung*. (Dissertation, Berlin). Interesting and detailed study in the spirit of Selz of the structures of thought-processes, anticipating more recent information-theoretic ideas. Includes an elaborate ontology of questions/problems.
- Hartmann, G. W. 1932 "Configural Factors in the Understanding of Actions", *Journal of General Psychology*, 7, 438-52.
- 1935 *Gestalt Psychology. A Survey of Facts and Principles*. New York: Ronald Press, repr. Westport: Greenwood, 1974. Readable and thorough, but poor on the immediate pre-history of the Berlin school.
- 1946 "The Gestalt View of the Process of Institutional Transformation", *Psychological Review*, 53, 282-89. See also Sickles and Hartmann.

- Hartmann, J. B. 1959 *A Gestalt Theory of Musical Representation*, (Dissertation, Northwestern University).
- Hartmann, L. 1923 "Neue Verschmelzungsprobleme", *Psychologische Forschung*, 3, 319-96, extracted in Ellis, ed., as "Further Studies of Gamma Movement", 182-91. Attempts to determine laws governing both motion and fusion phenomena in the wake of Koffka and of Lindemann 1922.
- Hatfield, G. and Epstein, W. 1985 "The Status of the Minimum Principle in the Theoretical Analysis of Visual Perception", *Psychological Bulletin*, 97, 155-86:  
 The particular model of brain activity advocated by the Gestalt psychologists has long since been discarded, and a new account of the minimum process based on contemporary knowledge of the brain has not been formulated. Nevertheless, a number of contemporary investigators have concluded that an excessively atomizing approach to physiological psychology is bound to fail, and that the problems of neurophysiology require confronting the theoretical and experimental perspectives demanded by the global, statistical or Gestalt aspects of the nervous system. (p.179)
- Have, T. T. ten 1941 *Totaliteit, Vorm, Structuur. Grondproblemen van Felix Kruegers Totaliteitspsychologie*, Groningen/Batavia: J.B. Wolters.
- Hayek, F. A. von 1952 *The Sensory Order. An Inquiry into the Foundations of Theoretical Psychology*, London: Routledge and Kegan Paul. Study of the interrelations of the senses. Implies that all mental qualities are so interrelated that any attempt to give an exhaustive description of one of them would make it necessary to describe the relations existing between all of them.
- 1963 "Rules, Perception and Intelligibility", *Proceedings of the British Academy*, 48 (for year 1962), repr. in Hayek's *Studies in Philosophy, Politics and Economics*, London: Routledge and Kegan Paul, 1967, 43-65. On the idea of mechanisms allowing the transference of the capacity to discern abstract orders or arrangements from one subject or field to another.

and on the implications of this idea for the understanding of e.g. language-learning, imitation and the perception of emotions. The essay concludes with a discussion of the analogies between rules for perception and rules for action and of the tacit knowledge involved in our comprehending the meanings of the actions of others.

- Hebb, D. O.                    1949    *The Organization of Behavior. A Neuro-psychological Theory*. New York: John Wiley. Includes criticism of Gestaltist ideas.
- 1980    *Essay on Mind*, Hillsdale, N.J.: Erlbaum. Esp. ch.8, "The Structure of Mind", relating Gestalt perceptual phenomena to processes involved in scientific thinking.
- Heidbreder, E.                1933    *Seven Psychologies*. New York: Appleton-Century-Crofts. Ch.9 is a survey of Gestalt psychology, especially in relation to other schools.
- Heider, F.                     1920    *Zur Subjektivität der Sinnesqualitäten*. (Dissertation, Graz). Do sense qualities – as opposed to acts of presenting sense-qualities – exist? How does it come about that we assume that sense qualities or phenomena correspond to a noumenal reality? To answer these questions Heider introduces an opposition between *thing* and *medium*, calling in aid Meinong's theory of dispositions: the thing is distinguished from the medium by the fact that it is the foundation of dispositional properties.
- 1926    "Ding und Medium", *Symposion*, 1, 109-57 and also as Separatum. Eng. trans. (slightly shortened) as "Thing and Medium", in Heider 1959, 1-34. (Revised version of second part of Heider 1920.)

When the ticking of a watch is the object of perception, the vibrations of the air mediate between the watch and the ear. Could [the two processes, i.e. the ticking and vibrations] exchange their roles in the process of perception? Does the one process act as medium only because it is closer to the ear than the other process? Or are there differences in the physical structures themselves (regardless of the possible relations to a

perceiving organism) which determinate whether they play the role of objects or mediators? (Eng. trans.. p.1f.)

Heider suggests that there are such differences and examines the structures of objects and mediators both in the different sensory modalities and in the linguistic domain. Objects are cores exhibiting higher intrinsic unity, i.e. their parts are mutually dependent, and serving as causal centres, moulding what they are surrounded by in its forms and processes. The latter sometimes yields spurious units, but these are intelligible only by reference to the unitary cause; its parts are mutually independent. 'It is the task of the apparatus of perception to construct out of the manifold of impinging offshoots something that is coordinated to core events.' (*Op.cit.*, p.34)

1930 "Die Leistung des Wahrnehmungssystems", *Zeitschrift für Psychologie*, 113, 371-94, Eng. trans. as "The Function of the Perceptual System", in Heider 1959, 35-52. Study of stimulus ambiguity, extending the ideas of Heider 1926. The paper distinguishes the following four spheres:

Th: The vitally relevant environment (we often call it "the world of things," but people, events, etc., also belong to it).

M: The mediating environment, the stimuli which directly impinge on the organism.

M': The processes in the organism correlated to the stimuli; they can be experienced under certain conditions, e.g. as reduction color.

Th': Experiences which refer to things...

Ambiguity of the local stimulus means: to a certain segregated part of the region M' correspond different events in region Th'. [Or more generally:] the regions MM', the regions of mediation, do not exactly correspond to the two regions ThTh' which are correlated to each other and which so to speak, hold hands across the mediation region.

The paper seeks to gain a better understanding of these regions, appealing to Gestalt notions and to the work of Bühler in a way which recalls the Graz school production theory (Heider was Meinong's last doctoral student in Graz).

- 1939 "Environmental Determinants in Psychological Theories", *Psychological Review*, 46, 383-410.
- 1944 "Social Perception and Phenomenal Causality", *Psychological Review*, 51, 358-74. Application of attribution theory in the sphere of social psychology.
- 1946 "Attitudes and Cognitive Organization", *Journal of Psychology*, 21, 107-12.
- 1958 *The Psychology of Interpersonal Relations*. New York: John Wiley, repr. Hillsdale, N.J.: Erlbaum, 1982. Seminal treatment of attribution in the sphere of social psychology.
- 1959 *On Perception, Event-Structure and Psychological Environment* (Selected Papers), *Psychological Issues*, 1, No.3.
- 1959a "The Function of Economical Description in Perception", in Heider 1959, 53-60. Compares ideas in Heider 1926, 1930, with work of Russell on perception and causality and of Mach on economy of thought. 'If it is true that perception often exhibits a tendency toward "Prägnanz" or toward "economical description", how can we relate this feature to the fact that perception, on the whole, leads to veridical results?'
- 1960 "The Gestalt Theory of Motivation", *Nebraska Symposium on Motivation*, 8, 145-72.
- 1970 "Gestalt Theory: Early History and Reminiscences", *Journal of the History of the Behavioral Sciences*, 6, 131-39, repr. in M. Henle, et al., eds. 1973, 63-73. Argues that Meinong and Benussi played an important role as foil in the development of the Berlin school theory.
- 1978 "Wahrnehmung und Attribution", in D. Görnitz, et al., eds., *Bielefelder Symposium über Attribution*, Stuttgart: Klett-Cotta, 13-18. On the historical roots of Heider's work on attribution and perception.
- 1984 *The Life of a Psychologist. An Autobiography*, Lawrence: University of Kansas Press.
- Heider, F. and Simmel, M. 1944 "A Study of Apparent Behavior", *American Journal of Psychology*, 57, 243-59.

- Heider, G.M.            1933    "New Studies in Transparency, Form and Color", *Psychologische Forschung*, 17, 13-56.
- 1968    "Kurt Koffka", *International Encyclopedia of the Social Sciences*, 8, 435-38.
- Held, R.                    see Köhler, Held and O'Connell.
- Helm, J.                   1960    "Über Gestalttheorie und Persönlichkeitstheorie", in P. Lersch and H. Thomae, eds., *Handbuch der Psychologie*, 4, Göttingen: Hogrefe, 357-90.
- Helson, H.                1925/26 "The Psychology of Gestalt", *American Journal of Psychology*, 36, 342-70 and 494-526; 37, 25-62 and 189-223. On the question-begging nature of the thesis that perceptual organization is a matter of 'Gestalt' structure.
- 1933    "The Fundamental Propositions of Gestalt Psychology", *Psychological Review*, 40, 13-32. A list of more than 100 'Gestalt laws'.
- 1951    "Perception", in Helson, ed., 348-89 (esp. discussion of Benussi).
- 1969    "Why did their precursors fail and the gestalt psychologists succeed? Reflections on theories and theorists", *American Psychologist*, 24, 1006-11, repr. in M. Henle, *et al.*, eds. 1973, 74-82 and in Ertel, *et al.*, eds., 13-20. Among the points Helson makes is:
- ...the Gestalters anticipated the tremendous surge in physiological psychology we are witnessing today. Granted that their physiologizing was subject to the most telling criticism (cf. Lashley, Chow, and Semmes 1951), the fact that they looked for and postulated physiological correlates of Gestalt phenomena shows their approach was in tune, if not with the times, at least with future trends. In this they were aided by the fact that the concept of Gestalt lent itself to physiological models, something that was not true of the concepts of their precursors and contemporaries: Akt, Gestaltqualität, objects of higher order, etc., conceived as psychic or the products of mental processes or contents, did not inspire physiological work or thinking. (p.17 of Ertel, ed.)

- Helson, H. ed., 1951 *Theoretical Foundations of Psychology*, New York: Van Nostrand.
- Helson, H. and Fehrer, E. V. 1932 "The Rôle of Form in Perception", *American Journal of Psychology*, 44, 79-102.
- Helson, H. and King, S. M. 1931 "The tau effect: An example of psychological relativity", *Journal of Experimental Psychology*, 14, 202-18. Discussion of phenomenal dependence of space and time following on from Benussi's book of 1913 and Gelb 1914. See also Guilford and Helson.
- Hempstead, L. 1900 "The Perception of Visual Form", *American Journal of Psychology*, 12, 185-92. Experimental investigation of laws governing associative completions of simple forms.
- Henle, M. 1942 "An Experimental Investigation of Past Experience as a Determinant of Visual Form Perception", *Journal of Experimental Psychology*, 30, 1-22.
- 1944 "An Examination of Some Concepts of Topological and Vector Psychology", *Character and Personality*, 12, 244-55.
- 1955 "Some Effects of Motivational Processes on Cognition", *Psychological Review*, 62, 423-32, repr. in Henle ed. 1961, 172-86.
- 1957 "On Field Forces", *Journal of Psychology*, 43, 239-49. Critique of ego-centred theories of motivation; defence of the notion of a field of forces as a means of coming to terms with the diversity and specificity of human motivation.
- 1962 "On the Relation between Logic and Thinking", *Psychological Review*, 69, 366-78, repr. in Henle 1986, 190-206. On the distinction between process and result in logic and on Köhler's opposition between good errors and stupid errors (the former may be absolutely appropriate to the situation although they solve the problem no more than do the latter).



- 1965 "On Gestalt Psychology", in B. B. Wolman, ed., *Scientific Psychology: Principles and Approaches*, New York: Basic Books, 276-92.
- 1974 "On Naive Realism", in MacLeod and Pick, eds., 40-56. Naive realism à la Gibson consists in the view that most of our perceptions are veridical in the sense that we are, in our experiences, in contact with the physical world. Henle's critical realism, in contrast, holds that we are in direct contact with the phenomenal world only, we have a relation to the physical world only indirectly.
- 1977 "The Influence of Gestalt Psychology in America", *Annals of the New York Academy of Sciences*, 291, 3-12, repr. in R. W. Rieber and K. Salzinger, eds., *Psychology: Theoretical and Historical Perspectives*, New York: Academic Press, 177-90 and in Henle 1986, 118-32
- 1977a "On the Distinction between the Phenomenal and the Physical Object", in J.M. Nicholas, ed., *Images, Perception and Knowledge*, Dordrecht: Reidel, 187-93, repr. in Henle 1986, 3-9. Naive realism denies the distinction between phenomenal and physical object; it results when one overlooks the processes that are responsible for perception. Indeed by the failure to consider the phenomenal object in its own right and on its own terms we are forced into subjectivism.
- 1979 "Phenomenology in Gestalt Psychology", *Journal of Phenomenological Psychology*, 10, 1-17. Includes treatment of points of agreement and disagreement between Husserl and Wertheimer, Köhler, Koffka.
- 1984 "Isomorphism: Setting the Record Straight". *Psychological Research*, 46, 317-27.
- 1986 *1879 and All That. Essays in the Theory and History of Psychology*, New York: Columbia University Press.
- (in press) "Rediscovering Gestalt Psychology", in S. Koch and D. Leary, eds., *A Century of Psychology as a Science*, New York: McGraw-Hill.

- Henle, M., ed. 1961 *Documents of Gestalt Psychology*, Berkeley and Los Angeles: University of California Press. Useful collection, principally of late Berlin school writings of Wertheimer, Köhler, Arnheim, Asch, Henle, etc.
- 1976 *Vision and Artifact* (Arnheim Festschrift), New York: Springer.
- Henle, M., Jaynes, J. and Sullivan, J., eds. 1973 *Historical Conceptions of Psychology*, New York: Springer.
- Hepke, M. and Stadler, M. 1972 "Über die Wirkung von Prägnanz und Redundanz in Punktkonfigurationen", *Zeitschrift für experimentelle und angewandte Psychologie*, 19, 376-99. A study of the effects of Prägnanz of point-figures on the perceived location of peripheral elements.
- Herrmann, T. 1957 *Problem und Begriff der Ganzheit in der Psychologie*, Vienna: Rohrer (*Sitzungsberichte der österreichischen Akademie der Wissenschaften*, phil.-hist. Klasse, 231,3), extended version as "Ganzheitspsychologie und Gestalttheorie" in H. Balmer, ed., *Die Psychologie des 20. Jahrhunderts. I. Die europäische Tradition*, Zurich: Kindler, 574-658. A broad historical survey of the Gestalt tradition, including discussion of Wundt as precursor of Gestalt theory, of the Austrian school and of the Leipzig school of Krueger, Sander, H. Volkelt and A. Wellek.
- 1960 "Der Schema-Begriff in der Denkpsychologie", in H. Thomae, ed., *Bericht über den 22. Kongreß der Deutschen Gesellschaft für Psychologie in Heidelberg, 1959*, Göttingen: Hogrefe, 115-132. History and pre-history of the concept of schema in the psychology of thinking. See esp. discussion of Selz and Betz.
- 1986 "Die Gestalttheorie von Christian v. Ehrenfels im Lichte moderner Kognitionspsychologie", in Fabian, ed., 65-84.
- Higginson, G.D. 1926 "The Visual Apprehension of Movement under Successive Retinal Excitations", *American Journal of Psychology*, 37, 63-115.

- 1926a "Apparent Visual Movement and the *Gestalt*, I. Nine Observations which stand against Wertheimer's Cortical Theory", *Journal of Experimental Psychology*, 9, 228-39.
- 1926b "Apparent Visual Movement and the *Gestalt*, II. The Effect upon Visual Movement of Colored Stimulus Objects", *idem*, 9, 240-52.
- 1926c "The Place of Ocular Movements in Stroboscopic Perception", *American Journal of Psychology*, 37, 408-13.
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- Hillebrand, F. 1922/23 "Zur Theorie der stroboskopischen Bewegungen", *Zeitschrift für Psychologie*, 89, 209-72, 90, 1-66. By student of Brentano and E. Hering. Conceives stroboscopic movement as a displacement, determined by the boundaries of the phenomena giving rise to the illusion, of the entire visual field: it is as if the locus of maximal clarity carries the whole visual field with it. For criticism cf. Wertheimer 1923a.
- 1929 *Die Lehre von den Gesichtsempfindungen*, Vienna: Springer.
- Hirsch, E. 1978 "A Sense of Unity", *Journal of Philosophy*, 75, 470-94. Esp. section III on Köhler: defends innatist position against conventionalist accounts of perceived unity.
- 1982 *The Concept of Identity*, Oxford: Oxford University Press.
- Hisata, T. 1934 "Experimentelle Untersuchungen über die 'Scheinbewegungen' im akustischen Gebiet", *Japanese Journal of Psychology*, 9, 367-400.
- Hochberg, J. 1955 "The Effects of the Gestalt Revolution: The Cornell Symposium on Perception", *Psychological Review*, 64, 73-84, repr. in Beardslee and Wertheimer, eds., 525-42. Study of perceptual

adaptation (work of I. Kohler, J. J. Gibson) and of event perception (work of Johansson, Michotte, Duncker).

- 1963 "Nativism and Empiricism in Perception", in L. Postman, ed., *Psychology in the Making. Histories of Selected Research Problems*, New York: Knopf, 255-330.
- 1966 "Representative Sampling and the Purposes of Perceptual Research. Pictures of the World and the World of Pictures", in Hammond, ed., 361-80. Sympathetic critique of Brunswik. 'What we accept as "adequately representative" is not independent of the particular theories we bring to be tested by the sampling procedure.' (p.379)
- 1973 "Attention, Organization, and Consciousness", in D. L. Mostofsky, ed., *Attention: Contemporary Theory and Analysis*, New York: Appleton-Century-Crofts, 99-124.
- 1974 "Organization and the Gestalt Tradition", in *Handbook of Perception*, vol. 1, *Historical and Philosophical Roots of Perception*, E. C. Carterette and M. P. Friedman, eds., New York/San Francisco/London: Academic Press, 179-210. The Gestalt 'laws' (law of good continuation, law of proximity, law of symmetry, etc.) constitute a 'set of loose prescriptions about the way in which figure-ground segregation will occur' (p.193). They have no predictive power, since we have no way of determining in any case which law will outweigh the others (which implies that there is a need to supply *measures*). Moreover, laws can act in consort or in conflict, and every pattern will involve the application of several laws. Hochberg points out further, in echo of the production theory that

The 'laws' are not *determinants*: i.e., by voluntary effort, the observer can alter and reverse figure and ground in some way that is not taken into account at all by a 'brain-field' explanation of figural organization. (p.188)

Further: the Gestalt theorists have not seriously addressed the fact that 'our perception of single figures requires us to integrate successive

glimpses into a single perceived object'. (p.191)  
 We tend to perceive things in such a way that  
 there is the smallest number of separate edges  
 and contours:

The figure-ground properties are a good qualitative fit  
 to what we would expect if the visuomotor system were  
 prepared to treat peripherally viewed lines as though  
 they were surface edges. (p.201)

- 1974a "Higher-Order Stimuli and Inter-Response  
 Coupling in the Perception of the Visual  
 World", in MacLeod and Pick, eds. 1974, 17-39.  
 Includes a comparison of Brunswik and Gibson  
 on the analysis of perceptual processes.
- 1978 *Perception*, 2nd ed., Englewood Cliffs, N.J.:  
 Prentice Hall. See esp. chs. 4 and 5 on  
 "Perceiving Objects as Structures of Sensation"  
 and "Higher-Order Units in Perception".
- 1979 "Sensation and Perception" in E. Hearst, ed.,  
*The First Century of Experimental Psychology*,  
 Hillsdale, N.J.: Erlbaum, 89-146.
- 1980 "Pictorial Functions and Perceptual Struc-  
 tures", in M. A. Hagen, ed., *The Perception of  
 Pictures*, New York: Academic Press, vol. II,  
 47-93.
- 1981 "Levels of Perceptual Organization", in M.  
 Kubovy and J. R. Pomerantz, eds., *Perceptual  
 Organization*, Hillsdale, N.J.: Erlbaum.
- Hochberg, J. and 1960 "The Psychophysics of Form: Reversible-  
 Brooks, V. Perspective Drawings of Spatial Objects",  
*American Journal of Psychology*, 73, 337-54.
- 1963 "Graphic Symbols: Things or Wholes?",  
*American Journal of Psychology*, 76, 326-29.
- Hochberg, J. and 1953 "A quantitative approach to figural 'good  
 McAlister, E. ness'", *Journal of Experimental Psychology*, 46,  
 361-64, repr. in Beardslee and Wertheimer,  
 eds., 188-93.
- Hochheimer, W. see Galli and Hochheimer.
- Hochleitner, A. 1940 "Die philosophischen Voraussetzungen und  
 Konsequenzen der Gestaltpsychologie", *Archiv*

für die gesamte Psychologie, 107, 71-124. Detailed and sober critique of Gestalt psychology, especially in relation to Köhler's isomorphism theory and to the problem of perception of transcendent objects when the psychic realm is 'materialized' and 'biologized'.

- Hoeth, F.                    1966    *Gesetzlichkeit bei stroboskopischen Alternativbewegungen* (Psychologische Arbeiten 10), Frankfurt: Kramer. Interesting application of graph-theoretical techniques, by student of Rausch.
- 1979    "Variabilität und Konstanz als phänomenologische Kategorien", *Gestalt Theory*, 1, 19-25. Treatment of ideas in Rausch 1949.
- 1980    "Bemerkungen zu dem vorangehenden Beitrag von P. Keiler", *Gestalt Theory*, 2, 113-14.
- 1981    "Zur Diskussion des Prägnanzbegriffs", *Gestalt Theory*, 3, 200-206. Argues that the specific processes involved in the recognition of *Prägnanz* must be specified if the concept is not to remain entirely empty.
- Höfler, A.                    1896    "Krümmungskontrast", *Zeitschrift für Psychologie*, 10, 99-108. Curvature as a Gestalt quality.
- 1896a   "Zur Analyse der Vorstellungen von Abstand und Richtung", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 10, 223-34. Distance and direction as components of the relation of difference between spatial positions.
- 1897    *Psychologie*, Vienna and Prague: Tempsky, 2nd ed., Vienna and Leipzig: Hölder, 1930. Energetically distinguishes Gestalt qualities and relations (e.g. against Marty, and later against Gelb). Includes the first treatment of transposability as an independent Gestalt criterion. Contains also an interesting treatment of velocity and other derived physical phenomena as Gestalt qualities.
- 1899    "Die abgeleiteten physikalischen Grössen und ihre Dimensionen", *Zeitschrift für den physikalischen und chemischen Unterricht*, 12,

- 14-25. Further treatment of velocity, along with density, intensity, force, work, energy, as Gestalt qualities (i.e. as 'a new content of presentation, over against time and path' and admitting of transposition: p.18).
- 1912 "Gestalt und Beziehung – Gestalt und Anschauung", *Zeitschrift für Psychologie*, 60, 161-228. Thorough survey. Höfler argues in particular that, while a Gestalt quality is not identical with a relation or a sum of relations, still 'Gestalt qualities obtain nowhere where relations do not also obtain' (p.200). The grasping of the relation can then contribute to the grasping of the Gestalt quality.
- 1919/20 "Gestaltpsychologie statt Assoziationspsychologie", *Zeitschrift für die österreichischen Gymnasien*, 69, 77- 87.
- 1921 "Tongestalten und lebende Gestalten", *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften in Wien*, 196/1, 94pp. The composer does not *create* new and original Gestalt structures; he is rather caught up in the web of pre-existing natural Gestalten, which are then reflected in his music.
- Höfler, A. and Witasek, S. 1899 *Hundert psychologische Schulversuche, mit Angabe der Apparate*, Leipzig: Barth.
- Hofmann, F. 1922 "Über das Formensehen", in K. Bühler, ed., *Bericht über den 7. Kongreß für experimentelle Psychologie in Marburg, 1921*, Jena: Fischer, 126-31. On the independence of pure form perception from mental set.
- Hofmann, H. 1913 "Untersuchungen über den Empfindungsbegriff", *Archiv für die gesamte Psychologie*, 26, 1-136. Detailed treatment of the structure of sensations, especially visual sensations of thing and space, strongly influenced by Husserl.
- Hofmann, W. 1955/57 "Gestalt und Symbol", *Jahrbuch für Ästhetik und allgemeine Kunstwissenschaft*, 3, 77-93.
- Hofstätter, P. R. 1955 "Über Ähnlichkeit", *Psyche*, 9, 54-80. By pupil of Bühler and Brunswik.

- 1956 "Apotheosis of Gestalt Psychology", *Contemporary Psychology* (American Psychological Association), 1. Issue 5, May 1956, 146f. Review of 2nd ed. of Metzger 1941. See Metzger 1960 for reply.
- Hofsten, C. see Johansson, Hofsten and Jansson.
- Holaday, B.E. 1934 "Untersuchungen über Wahrnehmungsgegenstände [ed. by E. Brunswik], II. Die Grössenkonstanz der Sehdinge bei Variation der inneren und äusseren Wahrnehmungsbedingungen", *Archiv für die gesamte Psychologie*, 88, 419-86.
- Holenstein, E. 1972 *Phänomenologie der Assoziation. Zu Struktur und Funktion eines Grundprinzips der passiven Genesis bei E. Husserl*, Hague: Nijhoff. Holenstein summarizes Husserl's criticism of Gestalt psychology as follows:  
with its naturalism, its unphenomenological causal explanation of Gestalten, an explanation which does not conform to consciousness, its conception of Gestalten as 'finished objects' which passes over their genetic constitution, and with the immediatism of its assumption of Gestalten as that which is directly given in consciousness [the Gestalt theory] has not, in the end, gone beyond the old categories of sensualism. (p.278)
- 1972a "Der Nullpunkt der Orientierung", *Tijdschrift voor Filosofie*, 34, 28-78, repr. in Holenstein, *Menschliche Verantwortung*, Frankfurt: Suhrkamp, 1985, 14-58. Argues against the dogma of the ego-centric origin of our perception of space, appealing to the results of Gestalt-theoretical investigations.
- 1980 *Von der Hintergebarkeit der Sprache*, Frankfurt: Suhrkamp.
- Holmes, D. 1968 "Search for 'Closure' in Visually Perceived Patterns", *Psychological Bulletin*, 70, 296-312.
- Honecker, M. 1924 "Komik und Einstellung. Ein Beitrag zur Lehre von den Bedingungen des komischen Erlebnisses", *Archiv für die gesamte Psychologie*, 47, 94-107. Includes a useful bibliography on humour and mental set.



- Hönigswald, R. 1921 *Die Grundlagen der Denkpsychologie. Studien und Analysen*, Munich: Reinhardt; revised 2nd ed. Leipzig: Teubner, repr. Darmstadt: Wissenschaftliche Buchgesellschaft, 1965. Esp. ch. 4: "Über das Begriffspaar 'Inhalt-Gegenstand' (Zum Problem der Bedeutung)", which contains an account of Gestalten as 'produced' objects.
- Hopper, P. 1979 "Aspect and Foregrounding in Discourse", in T. Givón, ed., *Discourse and Syntax (Syntax and Semantics 12)*, New York: Academic Press, 213-60.
- Hornbostel, E. M. von 1925 "Die Einheit der Sinne", *Melos (Zeitschrift für Musik)*, 4, 290-97; Eng. trans. "The Unity of the Senses", *Psyche*, 7, 83-89, repr. in Ellis, ed., 210-16. Seminal study of synaesthesia by Stumpf's former assistant in the Phonogrammarchiv in Berlin. 'Whether an event develops in the realm of sight or of hearing, in the realm of body or of spirit, does not change the way it develops.'
- 1927 "Laut und Sinn", in *Festschrift Meinhof, Sprachwissenschaftliche und andere Studien*, Hamburg: Kommissionsverlag von L. Friedrichsen, 239-48. Argues against the view according to which the relation between sound and linguistic sense is an arbitrary one. Hornbostel seeks to show that sound determines sense (that sound is originally fully adequate to the sense it expresses), by means of a discussion of 'acoustic *Glanz*'.
- 1930 "Gestaltpsychologisches zur Stilkritik", in *Studien zur Musikgeschichte. Festschrift für Guido Adler zum 75. Geburtstag*, Vienna: Universal (2nd ed. 1971), 12-16. The style e.g. of Brahms cannot be described: it must be conveyed by ostension. This does not mean that it is somehow vague. Nor does it mean that perception of it demands a special sort of intuition – it calls merely for the attention to the whole, the suspension of the analytic attitude.

- Hornbostel, E. M. v. and Wertheimer, M. 1920 "Über die Wahrnehmung der Schallrichtung", *Sitzungsberichte der preußischen Akademie der Wissenschaften*, 20, 388-96.
- Houssiadas, L. see Brown and Houssiadas.
- Hovland, C. I. 1933 "Apparent Movement", *Psychological Bulletin*, 32, 755-78. Review of literature from 1928 to 1933.
- Hruschka, E. 1959 *Experimentelle Beiträge zur Struktur eindimensionaler Bezugssysteme mit Dingcharakter*, (Dissertation, Tübingen).
- Hsiao, H.H. 1928 "A Suggestive Review of *Gestalt* Psychology", *Psychological Review*, 35, 280-97. Survey of concepts, laws and criticisms, sympathetic to Köhler-Koffka-Wertheimer Gestalt theory.
- 1928a "Some Contributions of Gestalt Psychology", *Psychological Bulletin*, 25, 613-20.
- Hubbell, M. M. 1940 "Configurational Properties Considered 'good' by Naive Subjects", *American Journal of Psychology*, 53, 46-69, repr. in Beardslee and Wertheimer, eds., 171-87. Study of *Prägnanz*. Subjects were asked to produce good visual configurations by making changes in a wide variety of figures. There is a steady increase in the chances that a change of some sort will take place as the figures go from the most closed and symmetrical to the most open and asymmetrical.
- Humphrey, G. 1924 "The Theory of Einstein and the 'Gestalt-Psychologie'. A Parallel", *American Journal of Psychology*, 35, 353-59.
- 1924a "The Psychology of the 'Gestalt'. Some Educational Implications", *Journal of Educational Psychology*, 15, 401-12.
- 1933 *The Nature of Learning in Relation to the Living System*, London/New York:
- 1948 *Directed Thinking*, New York: Dodd, Mead.
- 1951 *Thinking. An Introduction to its Experimental Psychology*, New York: Wiley, esp. ch.6, "The

Gestalt Theory of Thought". Humphrey supplies the following summary of the Gestalt theory of thinking:

(1) Pre-Gestalt theory concerned itself mainly with verbal problems, and relied largely on Association to supply both (a) the material, which was past experience, and (b) the mechanism of thinking, primarily the reproductive tendencies...

(2) The Gestalt theory maintains that the best thinking is not reproductive but productive. That the thought-activity is not energized even in part by the tendency of the present to reproduce the past.

(3) It proposes the hypothesis that when the organism is faced by a problem, stresses are set up which will work themselves out in organic activity, usually known as *Thinking or Problem-solving*.

(4) These activities ordinarily include both experience (conscious processes) and action.

(5) Perceptual reorganization (restructuring, re-centering), is a constituent part of the total process.

(6) Accompanied by this reorganization is, according to some of the workers, an experience known as Insight. The term is reserved by Köhler for the 'experience of determination'...

(7) The general result of the interaction of problem-stresses is a kind of activity (i.e. experience and action) which may be called, at least relatively, "new".

(8) The energizing motivation is thus "internal" to the problem-as-perceived. (pp. 183f.)

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|                                    | 1956 | "Der bedingte Reflex und das Phi-Phänomen: sind sie grundsätzlich gleich?", <i>Psychologische Beiträge</i> , 2, 215-25.   |
| Humphrey, G. and Stringbett, B. M. | 1946 | "The After-Image of the Phi-Phenomenon", <i>Canadian Psychological Association Bulletin</i> , 6, 3-6.   |
| Hunter, W. S.                      | 1913 | "The Question of Form-Perception", <i>Journal of Animal Behavior</i> , 3, 329-33.   |
| Hüppe, A.                          | 1984 | <i>Prägnanz. Ein gestalttheoretischer Grundbegriff</i> , München: Profil.   |
| Husserl, E.                        | 1891 | <i>Philosophie der Arithmetik. Psychologische und logische Untersuchungen</i> , Halle: Niemeyer, repr. in <i>Husserliana</i> , XII (The Hague: Nijhoff, 1970). See pp. 18-21 above. |

- 1893 "Anschauung und Repräsentation", first publ. in Husserl 1979, 269-302. Includes a study of the perception of melodies and of the hierarchical structure of higher order Gestalten.
- 1894 "Psychologische Studien zur elementaren Logik. I. Über die Unterscheidung von abstrakt und konkret. II. Anschauungen und Repräsentationen", *Philosophische Monatshefte*, 30, 159-91, repr. in Husserl 1979, 92-123. Eng. trans. by D. Willard in *The Personalist*, 58, 1977, 295-320.
- 1900/01 *Logische Untersuchungen*, 1st ed. (A), Halle: Niemeyer, 2nd ed. (B), 1913/21 (Husserliana vols. XVIII, XIX/1, XIX/2); trans. by J. N. Findlay as *Logical Investigations*, London: Routledge and Kegan Paul, 1970.
- 1962 *Phänomenologische Psychologie*, The Hague: Nijhoff (Husserliana, vol. IX).
- 1979 *Aufsätze und Rezensionen 1890-1910*, B. Rang, ed., The Hague: Nijhoff (Husserliana, vol. XXII).  
For a detailed treatment of Husserl and Gestalt psychology see Holenstein 1972.
- Imai, S. 1972 *Selected List of Japanese Works on Geometrical-Optical Illusions*, Tokyo.
- Ipsen, G. 1926 "Über Gestaltauffassung. Erörterung des Sanderschen Parallelogramms", *Neue Psychologische Studien*, 1, 167-278.
- 1926a "Zur Theorie des Erkennens. Untersuchungen über Gestalt und Sinn sinnloser Wörter", *Neue Psychologische Studien*, 1, 279-471.
- Iritani, T.: see Nozawa and Iritani.
- Izzet, T. 1934 "Untersuchungen über Wahrnehmungsgegenstände [ed. by E. Brunswik], VI. Gewicht und Dichte als Gegenstände der Wahrnehmung", *Archiv für die gesamte Psychologie*, 91, 305-18.
- Jääskeläinen, M. 1981 "Gestalt Theory in the Psychology of Eino Kaila", *Gestalt Theory*, 3, 244-54.

- Jackendoff, R. S. 1983 *Semantics and Cognition* (Current Studies in Linguistics), Cambridge, Mass.: MIT Press. Treatment of semantic theory emphasizing the role of semantics as a bridge between the theory of language and theories of other cognitive capacities such as visual perception and motor control. The basis of the work is an ontology – built around the categories *thing, place, direction, action, event, manner, and amount* – of what Jackendoff calls the projected world. Reference to projected world entities is achieved by using markers, thus: '\$ \$'. Jackendoff points out, for example, that
- perceived \$wholes\$ are often greater than the sum of their \$parts\$. The explanation is that, of the mental information that is projected as the \$whole\$, only those components that are *independently projectable* can result in perceived \$parts\$. The presence of the rest can be sensed intuitively through the disparity between the \$wholes\$ and the \$parts\$, but its nature cannot be revealed in any simple way by introspection alone. (p.35)
- Gestalt ideas are employed throughout the work, esp. in the discussion of principles of grouping in ch.8:
- We have seen...that the characteristics of preference rule systems are found everywhere in psychological processes, all the way from low-level perceptual mechanisms to problems so prominent in our conscious life as to be of social and political concern. Thus there is no obstacle in principle to adopting them as part of a theory of word meanings. Yet the notion of a preference rule system has not been recognized as a unified phenomenon, except perhaps by the Gestalt psychologists. (p.156f.)
- Jaensch, E. R. 1909 *Zur Analyse der Gesichtswahrnehmungen. Experimentell-psychologische Untersuchungen nebst Anwendungen auf die Pathologie des Sehens* (Zeitschrift für Psychologie, Ergänzungsband 4), Leipzig: Barth.
- 1911 *Über die Wahrnehmung des Raumes. Eine experimentell-psychologische Untersuchung nebst Anwendung auf Ästhetik und Erkenntnistheorie* (Zeitschrift für Psychologie, Ergänzungsband 6), Leipzig: Barth. Dedicated to

- G.E.Müller. Reveals also some influence of Husserl. Includes an application of the theory of space-perception to the analysis of impressionist painting.
- 1929 "Über Gestaltpsychologie und Gestalttheorie", in E. R. Jaensch and L. Grünhut, *Über Gestaltpsychologie und Gestalttheorie*, Langensalza: Beyer, 5-54. A critique of Köhler's doctrine of physical Gestalten.
- 1932 "Strukturpsychologische Erläuterungen zur philosophischen Zeitlehre, insbesondere bei Bergson und Proust", *Zeitschrift für Psychologie*, 124, 55-92.
- Jaensch, E. R. *et al.* 1923/31 *Über den Aufbau der Wahrnehmungswelt und die Grundlagen der menschlichen Erkenntnis*, in 2 parts, Part I: *Eine Untersuchung über Grundlagen und Ausgangspunkte unseres Weltbildes, durchgeführt mit den Forschungsmitteln der Jugendpsychologie, angewandt auf erkenntnistheoretische, naturphilosophische und pädagogische Fragen*; Part II: *Über die Grundlagen der menschlichen Erkenntnis*, Leipzig: Barth.
- Jakobson, R. and Waugh, L. R. 1979 *The Sound Shape of Language*, Brighton: Harvester. 'Shape', here, is equivalent to 'Gestalt'.
- Jansson, G. see Johansson, Hofsten and Jansson.
- Jaworsky, B. 1934 "Die Struktur des melodischen Geschehens", *Archiv für die gesamte Psychologie*, 92, 315-44. On forms of melodic Gestalten ('stable', 'pronounced', 'closed', 'concluding', etc.) and on the associated processes involved in listening to melodies. See also Belaiew-Exemplarsky and Jaworsky.
- Johansen, M. 1954 *An Introductory Study of Voluminal Form Perception*, (*Nordisk Psykologi's Monograph Series*, No.5), Copenhagen: Munksgaard.
- Johansson, G. 1950 *Configurations in Event Perception*, Uppsala: Almqvist and Wiksell. By pupil of Katz.

- 1950a "Configurations in the Perception of Velocity", *Acta Psychologica*, 7, 25-79. The experienced velocity of a visible object in motion is influenced by the motion of another object in the same perceptual field. The essay is an examination of the factors governing this influence.
- 1958 "Rigidity, Stability and Motion in Perceptual Space", *Acta Psychologica*, 14, 359-70.
- 1964 "Perception of Motion and Changing Form", *Scandinavian Journal of Psychology*, 5, 181-208.
- 1966 "Geschehenswahrnehmung", in Metzger and Erke, eds., 745-75.
- 1968 "Vision Without Contours: A Study of Visual Information from Ordinal Stimulation", *Perceptual and Motor Skills*, 26, 335-51.
- 1970 "On Theories for Visual Space Perception. A Letter to Gibson", *Scandinavian Journal of Psychology*, 11, 67-74. (Gibson's reply, *idem*, 75-79.) Repr. in Gibson 1982, 76-84.
- 1971 *Visual Motion Perception*, University of Uppsala Reprint Series, 98.
- 1973 "Visual Perception of Biological Motion and a Model for its Analysis", *Perception and Psychophysics*, 14, 201-11.
- 1974 "Projective Transformations as Determining Visual Space Perception", in MacLeod and Pick, eds. 1974, 117-38. Because the eyes of an active observer are always (or very nearly always) moving relative to the environment, and because the environment often displays some kind of motion or other change, we can never speak of a 'retinal image' but only of an ever-changing *optical flow*.
- 1976 "Spatio-Temporal Differentiation and Integration in Visual Motion Perception", *Psychological Research*, 38, 379-93.

- 1977 "Spatial Constancy and Motion in Visual Perception", in Epstein, ed., 375-420. How can constant objects be perceived given continuously changing optical patterns? Johansson substitutes for the traditional theory founded on an absolute (Euclidean) metric a theory based on the invariant relations under changes of figural form.
- Johansson, G., Hofsten, C. von, and Jansson, G. 1980 "Event Perception", *Annual Review of Psychology*, 31, 27-63.
- Juhász, A. 1924 "Zur Analyse des musikalischen Wiedererkennens", *Zeitschrift für Psychologie*, 95, 142-80. On transposability and coherence as factors conducive to recognition.
- 1927 "Zur Grundlegung der Geruchspsychologie", in *Proceedings and Papers of the 8th International Congress of Psychology at Groningen, 1926*, Groningen: Noordhoff, 305-309.
- Junker, H. 1924 "Die indogermanische und die allgemeine Sprachwissenschaft", in J. Friedrich, *et al.*, eds., *Stand und Aufgabe der Sprachwissenschaft* (W. Streitberg FS), Heidelberg: Winter, 1-64. Remarkable account of linguistic structures, building on ideas of Bühler, Höningwald, Selz and Koffka. Junker puts forward a view of language as consisting of hierarchies of Gestalt qualities, both above and below the sentential level. Various semantic sentence-schemata of the sort later to be analysed in work on case structure and generative semantics are described by Junker within this framework. Of particular interest is the treatment of Gestalt-structures of emphasis and of the dependence-relations amongst the parts of a sentence. The paper also anticipates Jakobson's demonstration that there are correlations between the sequences in which linguistic structures are acquired and the sequences in which they are lost, e.g. in pathological disturbances.



- Kaila, E.
- 1923 *Sielunelämän rakenne* (The Structure of Mental Life), Porvoo: Werner Söderström. Synoptic study, appreciative of the Berlin school and stressing anticipations of Gestalt theory in the work of James.
- 1923a "Gegenstandsfarbe und Beleuchtung". *Psychologische Forschung*, 3, 18-59. On the opposition between the relatively constant colour of objects and their changing, non-thing-like illumination.
- 1928 *Beiträge zu einer synthetischen Philosophie, Turun Yliopiston Julkaisuja, Annales Universitatis Aboensis, Series B, IV, no.3*, Turku. Sympathetic criticism of Köhler 1920; argues that the neural equivalents of psychic Gestalten are additive. Describes Gestalt theory as the germ of a philosophy of emergent monism, embracing organic and inorganic nature as well as mental phenomena within a single category.
- 1932 "Hahmopsykologia" (Gestalt Psychology), *Iso Tietosanakirja* (The Encyclopedia), 4, Helsinki: Otava, section 239.
- 1934 *Persoonallisuus* (The Human Personality), Helsinki: Otava (2nd ed., 1938, 3rd ed., 1946, 4th ed., 1952; Swedish and Danish translations 1935, 1949). Study of the purposive nature of human behaviour in terms of a 'dynamic of needs'. Described by von Wright as a 'vindication of the fertility of the principles of Gestalt-psychology' (Kaila 1979, p. xxi)
- 1936 *Über das System der Wirklichkeitsbegriffe. Ein Beitrag zum logischen Empirismus (Acta Philosophica Fennica, 2)*, Helsinki. Eng. trans. as "On the System of the Concepts of Reality. A Contribution to Logical Empiricism" in Kaila 1979, 59-125. We say that the phenomena underlying a perceptual illusion belong to 'reality'. Kaila subjects this notion of reality to an analysis in the spirit of logical positivism but appealing also to the results of the Gestalt theorists (esp. of Katz on the phenomena of touch).

- 1936a Review of Bühler 1932, *Erkenntnis*, 6, 65-68.
- 1942 "Physikalismus und Phänomenalismus", *Theoria* (Sweden), 8, 85-125. Defence of 'Gestalt-behaviourism'. Includes treatment of sign-Gestalten in the spirit of Bühler's *Sprachtheorie*.
- 1943 "Kvanttiteorian filosofinen problematiikka loogillisen empirismin valossa" (Philosophical Problems of Quantum Theory in the Light of Logical Empiricism), *Ajatus*, 12, 41-127. Takes as its motto a phrase derived from Dirac: 'All important things in our experience appear as the invariants of certain transformations'. Concludes with a remark 'on the possibility of applying the mathematical apparatus of wave-mechanics to an analysis of the *Gestalt*-qualities of perceptions and other mental phenomena. Kaila thought that the quantum-theoretic interpretation of these qualities as "vibrations" in the neural system might yield a physicalist explanation of the psychophysical *Gestalt*-laws' (von Wright in Kaila 1979, p.xxxvi).
- 1944 "Logik und Psychophysik. Ein Beitrag zur theoretischen Psychologie", *Theoria*, 10, 91-119. A critique of phenomenological treatments of constancy-phenomena and of the Ehrenfels *Gestalt* qualities, inspired in part by Wittgenstein.
- 1945 "Hahmoproleemasta, ynnä muutamista muista teoreettisen psykologian ongelmista" (The *Gestalt* Problem and Some Other Problems in Theoretical Psychology), *Ajatus*, 13, 5-89. 'Scientific' psychology must be behaviourist – it must aim 'to give a structural description of intersubjectively observable phenomena – including phenomena of *Gestalt*-character. This emphasis on "structure" and "intersubjectivity" is connected with a criticism of attempts to give a *phenomenologically* satisfying description of the *Gestalt*-qualities'. The work suggests a new solution to the problem of psychophysical parallelism. 'Instead of looking for neural equivalents in *macro*-physical

*inter-cellular constellations in the brain, one should look for them in micro-physical intra-cellular fields', a suggestion which aims at connecting the foundations of psychology with the field theories of atomic physics (cf. von Wright in Kaila 1979, p. xxiif.).*

- 1947 "En gestaltpsykologisk betraktelse över moral-filosofins centralproblem" (The Central Problem of Moral Philosophy from the Standpoint of Gestalt Psychology), *Tidskrift för psykologi och pedagogik*, 3, 28-30.
- 1960 *Die perzeptuellen und konzeptuellen Komponenten der Alltagserfahrung (Acta Philosophica Fennica, 13)*, Helsinki. English translation of original Finnish version as "The Perceptual and Conceptual Components of Everyday Experience" in Kaila 1979, 259-312. On the constitution of the physical world on a phenomenal basis. The essay was originally planned as part of a longer work entitled *Hahmottuva maailma (The World as a Structured Whole)*.
- 1979 *Reality and Experience. Four Philosophical Essays*, ed. by R. S. Cohen with an Introduction by G. H. von Wright, Dordrecht: Reidel. Includes a bibliography of Kaila's philosophical and psychological writings (pp.313-22).
- Kainz, F. 1927 "Gestaltgesetzlichkeit und Ornamententstehung", *Zeitschrift für angewandte Psychologie*, 28, 267-327. Gestalt laws and aesthetics.
- Kallen, H. 1948 "Max Wertheimer, 1880-1941", *Social Research*, 15, 235-43.
- Kamiya, J. see Brunswik and Kamiya.
- Kanizsa, G. 1951 "Sulla polarizzazione del movimento gamma", *Archivio di Psicologia, Neurologia e Psichiatria*, 12, 224-67.
- 1954 "Il gradiente marginale come fattore del aspetto fenomenico dei colori", *Archivio di Psicologia, Neurologia e Psichiatria* 15, 251-64.

- 1954a "Alcune osservazioni sull'effetto Musatti", *Archivio di Psicologia, Neurologia e Psichiatria*, 15, 265-71, Eng. trans., "Some Observations on Color Assimilation", in Kanizsa, ed. 1979, 143-50.
- 1955 "Margini quasi-percettivi in campi con stimolazione omogenea", *Rivista di Psicologia*, 49, Fascicolo I, 7-30. On the notion of *virtual contour*. Characterizes the conditions which give rise to such contours in terms of a Gestalt tendency towards closure, i.e. towards completion of figures lacking some part.
- 1955a "Condizioni ed effetti della trasparenza fenomenica", *Rivista di Psicologia*, 49, Fascicolo III, 3-18, Eng. trans., "Phenomenal Transparency", in Kanizsa 1979, 151-69. On topological and figural conditions of transparency and on the effects of transparency on brightness.
- 1956 "Il fattore empirico nella percezione", *Rassegna di Psicologia generale e clinica*, 1, 3-9.
- 1960 "Randform und Erscheinungsweise von Oberflächen", *Psychologische Beiträge*, 5 (Metzger Festschrift), 93-101, Eng. trans. "Margins and Color", in Kanizsa 1979, 135-42. On the dependence of the appearance of the colour of an enclosed surface on the structure of the enclosing boundary. If, for example, the straight edges of a rectangle are replaced by zig-zag lines, this results in changes of brightness, saturation and texture.
- 1966 "Die Erscheinungsweisen der Farben", in Metzger and Erke, eds., 161-91. On surface-, thing- and space-colours, transparency, sheen and illumination.
- 1968 "Percezione attuale, esperienza passata e l'esperimento impossibile", in Kanizsa and Vicario, eds., 9-48.
- 1969 "Perception, Past Experience and the Impossible Experiment", *Acta Psychologica*, 31, 66-96, repr. in Kanizsa 1979, 25-54. Argues

- against Mussati (1958a) that it is possible to set up experiments to decide between the empiricist and Gestaltist explanations of paradoxical figures. Kanizsa points to a range of circumstances in which perceptual organization imposes itself against expectation and past experience.
- 1970 "Amodale Ergänzungen und 'Erwartungsfehler' des Gestaltpsychologen", *Psychologische Forschung*, 33, 325-44, Eng. trans., "The Gestaltist's Error and other Expectation Errors", in Kanizsa 1979, 72-91. On the surprise felt by a Gestalt psychologist when a perceptual phenomenon does not correspond to expectations raised by the schematic application of Gestalt laws. The paper identifies what Kanizsa calls an 'inference error', the tendency to interpret perception not as direct experience but as the result of inference.
- 1970a "Di alcuni luoghi comuni sulla psicologia della Gestalt", *Rivista di Psicologia*, 64, 187-202.
- 1972 "Errore dei gestaltisti ed altri errori-d'aspettativa", *Rivista di Psicologia*, 66, 3-18.
- 1972a "Schrumpfung von visuellen Feldern bei amodaler Ergänzung", *Studia Psychologica*, 14, 208-10.
- 1974 "Contours without gradients or cognitive contours?", *Italian Journal of Psychology*, 1, 93-112, repr. as "Anomalous Contours and Surfaces", in Kanizsa 1979, 192-221. Anomalous contours (also called cognitive or subjective contours) are contours that have no counterpart in the stimulus. In a phenomenal field containing figures with certain sorts of gaps there arises the impression of just that opaque surface that permits the amodal completion of these figures.
- 1975 "Prägnanz as an Obstacle to Problem Solving", *Italian Journal of Psychology*, 2, 417-25, repr. in Kanizsa 1979, 238-53. Problem-solving may be conceived as a series of restructurings of

cognitive material. Kanizsa shows how organizational factors may lead to premature closure, rather than to a solution of the problem.

- 1975a "The Role of Regularity in Perceptual Organization", in Flores d'Arcais, ed., 48-66, repr. in Kanizsa 1979, 92-112. Demonstrates the limitations of regularity (or *Prägnanz*) as a principle of Gestalt organization.
- 1975b "Some New Demonstrations of the Role of Structural Factors in Brightness Contrast", in Ertel, *et al.*, eds., 219-26, repr. in Kanizsa 1979, 170-80.
- 1975c "Amodal Completion and Phenomenal Shrinkage of Surface in the Visual Field", *Italian Journal of Psychology*, 2, 187-95, repr. as "Phenomenal Shrinkage and Expansion of Visual Surfaces" in Kanizsa 1979, 181-91. Amodal or non-phenomenal completion (completion other than via perceptual modes), e.g. through induced figure-ground segmentation, imagined presence of a continuation, of the rear side of an object, etc.
- 1976 "Vedere e pensare", in G. Siri, ed., *Problemi epistemologici della psicologia*, Milan: Pubblicazione della Università Cattolica del Sacro Cuore, 88-97.
- 1976a "Subjective Contours", *Scientific American*, 234 (April), 48-52.
- 1978 "La teoria della gestalt: distorsioni e fraintendimenti", in Kanizsa and Legrenzi, eds., 39-61. Eng. trans. "Gestalt Psychology: What it is not", in Kanizsa 1979, 55-71. The essay is concerned to refute a series of mistaken conceptions of Gestalt psychology, including 1. the view that Gestalt psychology is basically a psychology of perception; 2. conceptions of Gestalt psychology as reductionist, nativist, vitalist; 3. the view that Gestalt psychology rejects analysis and the scientific method; 4. views according to which Gestalt psychology denies the importance of motivational factors and the influence of past experience; 5. the

misunderstanding of 'Prägnanz' as 'symmetry'. With regard to the last, Kanizsa points out that the most ordered, stable, balanced state possible in a system will involve symmetry only in the most simple of cases.

- 1979 *Organization in Vision: Essays on Gestalt Perception*, New York: Praeger.
- 1979a "Two Ways of Going Beyond the Information Given", in Kanizsa 1979, 1-24. See pp. 29-31 above.
- 1979b "The Polarization of Gamma Movement", in Kanizsa 1979, 113-34.
- 1980 *La grammatica del vedere*, Bologna: Il Mulino.
- Kanizsa, G. ed. 1984 *Fenomenologia sperimentale della visione*, Milan: Franco Angeli.
- Kanizsa, G. and Gerbino, W. 1976 "Convexity and Symmetry in Figure-Ground Organization", in M. Henle, ed. 1976, 25-32. On Bahnsen's stripe figures and on the role of convexity in figure-ground organization.
- 1981 "Il completamento amodale tra vedere e pensare", *Giornale Italiano di Psicologia*, 8, 279-307. Completion phenomena as a means of distinguishing between perception and non-sensory representation. Perceptual completions are not only phenomenally different from represented completions, but they also give rise to well-defined effects.
- Kanizsa, G. and Grubissa, B. 1976 "Facilitation from Above and Facilitation from Below in Solving a Problem", *Italian Journal of Psychology*, 3, 421-30.
- Kanizsa, G. and Legrenzi, P. eds. 1978 *Psicologia della gestalt e psicologia cognitivista*, Bologna: Il Mulino.
- Kanizsa, G., Legrenzi, P. and Meazzini, P. 1975 *I processi cognitivi. Un'introduzione alla psicologia generale*, Bologna: Il Mulino.
- Kanizsa, G. and Luccio, R. 1981 "Stima del numero e impressione di numerosità", *Reports from the Institute of Psychology*, University of Trieste.

- 1981a "L'incompletezza figurale come fattore di sottostima della numerosità", *Reports from the Institute of Psychology*, University of Trieste.
- 1984 "La gravidanza e le sue ambiguità", *Reports from the Institute of Psychology*, University of Trieste. Wide-ranging study of the opposition between Prägnanz as singularity and Prägnanz as tendency towards organization in the pre-categorical level of perceptual processing.
- Kanizsa, G. and Metelli, F. 1961 "Recherches expérimentales sur la perception visuelle d'attraction", *Journal de Psychologie normale et pathologique*, 58, 385-420.
- Kanizsa, G. and Minguzzi, G. F. 1984 "Contrasto e assimilazione di chiarezza" in Kanizsa, ed., 73-96.
- Kanizsa, G. and Tampieri, G. 1976 "Environmental and Retinal Frames of Reference in Visual Perception", *Italian Journal of Psychology*, 2, 317-32, repr. in Kanizsa 1979, 222-37.
- Kanizsa, G. and Vicario, G. 1968 "La percezione della reazione intenzionale", in Kanizsa and Vicario, eds., 69-126. Study, in the spirit of Michotte and of Heider and Simmel, of the conditions for the perception of those movements carrying the expressive quality of *reacting* to something or other. The inquiry distinguishes spatial and temporal conditions and kinetic and field or figural conditions, thereby generating an interesting morphology of events of the given sort.
- Kanizsa, G. and Vicario, G., eds. 1968 *Ricerche sperimentali sulla percezione*, Trieste: Edizioni Università degli Studi. Dedicated to C.L. Musatti.
- 1985 [Kanizsa Festschrift] *Conoscenza e struttura. Saggi in onore di Gaetano Kanizsa*, Bologna: Il Mulino.
- Kantor, J. 1925 "The Significance of the Gestalt Conception in Psychology", *Journal of Philosophy, Psychology and Scientific Method*, 22, 234-41. Not very useful evaluation of Gestalt as doctrine, as scientific movement, and as attitude.



- 1928 "Dingfarbenwahrnehmung und Duplizitätstheorie", *Zeitschrift für Psychologie*, 108, 240-314. On the relations between thing as intended object and thing as causal (stimulus) of sensory experience. A theory will produce a *Deckung* (coincidence) of the former and the latter only if the environment (medium) is taken into account.
- 1929 "Die 'Konstanz' phänomenaler Dingmomente: Problemgeschichtliche Darstellung", in E. Brunswik, *et al.*, 1929, 1-77. Historical treatment of place and size constancy and especially of colour-constancy (theories of Hering, Helmholtz, Katz and Bühler).
- 1930 "Besondere Fälle des Farbensehens und das Duplizitätsprinzip", in H. Volkelt, ed., *Bericht über den 11. Kongreß für experimentelle Psychologie in Wien, 1929*, 95-97.
- 1931 "Diskussionen über Probleme des Farbensehens", *Archiv für die gesamte Psychologie*, 78, 185-214 (with reply by Katz, pp.215f.).
- 1934 *Ding und Schatten. Eine experimentelle Untersuchung über die Grundlagen des Farbensystems (Zeitschrift für Psychologie, Ergänzungsband 23)*, Leipzig: Barth. Classic study of the structure of shadows. Affirms that there is no shadow without a penumbra (p.53): even those special cases of shadows which appear to have sharp contours appear less focused when compared with contours of things or geometrical figures. Kardos therefore considers the possibility that a gradient of penumbra, even where not phenomenally present, nevertheless exerts its effect (as it were virtually) on shadow perception. Cf. Metelli 1975b.
- 1935 "Versuch einer mathematischen Analyse von Gesetzen des Farbensehens", *Zeitschrift für Sinnesphysiologie*, 66, 182-212.
- 1957 "Az alaklélektan birálata" (A Critique of Gestalt Psychology), *Magyar Filozófiai Szemle*, 1, 124-40 and 272-304. Survey and criticism.

particularly of the theory of *Prägnanz* and of the nativism of the Gestalt theorists, whom Kardos charges with neglecting the role of evolution.

- 1962 *Grundfragen der Psychologie und die Forschungen Pawlows*, Budapest: Akadémia Kiadó. Ch.15 contains a critique of Gestalt psychology from a behaviourist point of view.
- 1965 "Die Rolle der Korrektionssysteme in der Wahrnehmungsorganisation", in H. Heckhausen, ed., *Bericht über den 24. Kongreß der Deutschen Gesellschaft für Psychologie in Wien, 1964*, Göttingen: Hogrefe, 80-85.
- 1987 "Bühlers 'mißlungene' Theorie der Farbenkonstanz. Eine wissenschaftstheoretische Analyse", in A. Eschbach, ed.
- Kardos, L., ed. 1974 *Alaklélektan (Gestalt Psychology)*, Budapest: Gondolat. Large collection of Hungarian translations of works by Gestalt theorists from Ehrenfels and Gelb to the Berlin School and Lewin, with a comprehensive introduction by the editor. See also Brunswik and Kardos.
- Karkosch, K. 1935 "Über die Anfänge der Lehre von den 'Gestaltqualitäten' (Christian von Ehrenfels). Der Problemgehalt eines Begriffs", (Dissertation, Munich; under Hönigswald and Pfänder, 1933), *Archiv für die gesamte Psychologie*, 93, 189-223. Useful treatment of Ehrenfels' ideas and of the literature thereon.
- Karsten, A. 1928 "Psychische Sättigung", *Psychologische Forschung*, 10, 142-54, Eng. trans. in De Rivera, ed., 151-207. By member of Lewin group in Berlin.
- Kastein, G.W. 1937 *Eine Kritik der Ganzheitstheorien*, (Dissertation, Leiden: Ginsberg). On the Leipzig School.
- Katona, G. 1924 *Psychologie der Relationserfassung und des Vergleichens*, Leipzig: Barth. Heavily influenced by G. E. Müller, includes discussion of both Graz and Berlin Gestalt theory.

- 1925 "Experimente über die Grössenkonstanz: Ansätze zu einer Analyse der Gesichtswahrnehmung", *Zeitschrift für Psychologie*, 97, 215-52.
- 1926 "Experimentelle Untersuchung über simultane und sukzessive Gesichtswahrnehmungen", *Psychologische Forschung*, 7, 226-56.
- 1926a "Die simultane und sukzessive Wahrnehmung", in K. Bühler, ed., *Bericht über den 9. Kongreß für experimentelle Psychologie in München, 1925*, Jena: Fischer, 179-81.
- 1929 "Zur Analyse der Helligkeitskonstanz", *Psychologische Forschung*, 12, 94-126.
- 1940 *Organizing and Memorizing*, New York: Columbia University Press.
- Katz, D. 1906 "Experimentelle Beiträge zur Psychologie des Vergleichs im Gebiet des Zeitsinns", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 42, 302-40, 414-50.
- 1911 *Die Erscheinungsweisen der Farben und ihre Beeinflussung durch die individuelle Erfahrung*, *Zeitschrift für Psychologie*, Ergänzungsband 7; rev. ed., as *Der Aufbau der Farbwelt*, Leipzig, 1930; abridged Eng. trans. by R. B. MacLeod and G. W. Fox as *The World of Colour*, London: Kegan Paul, Trench, Trubner, 1935. Influenced by Helmholtzian associationism, by G. E. Müller, by E. Hering and also, at least methodologically, by Husserl (see p.30). The new title of the second edition reflects Katz's conclusion that 'individual experience' is relatively unimportant as a factor influencing our perception of (most) colour-phenomena. The book introduces the distinction between surface colours, which are attached to objects, and film colours, which appear to float freely in space. Katz deals also with phenomena of transparency, reflection, lustre, luminescence, glow, etc.
- 1913 "Über individuelle Verschiedenheiten bei der Auffassung von Figuren. (Ein kasuistischer

Beitrag zur Individualpsychologie)”, *Zeitschrift für Psychologie*, 65, 161-80.

- 1925 *Der Aufbau der Tastwelt* (*Zeitschrift für Psychologie*, Ergänzungsband 11), Leipzig: Barth, repr. Darmstadt: Wissenschaftliche Buchgesellschaft, 1969. On the ‘almost inexhaustible richness of the touchable world’. Katz pleads for the cognitive primacy of touch (i.e. pressure data) over sight and hearing, reflecting the objective indispensability of the former. He reveals a parallel to the film/surface difference in the world of touch, deals with haptic cognition of spatial depth, transparency (the possibility of touching through e.g. liquids, soft tissue), and discusses the figure/ground opposition in relation to touch.
- 1944 *Gestaltpsychologie*, Basel: Schwabe, 2nd ed. 1948, 4th ed. revised by W. Metzger, 1969; Eng. trans., of 2nd ed. by R. Tyson as *Gestalt Psychology*, New York: Ronald, 1950. Only partially adequate survey.
- 1949 “Gestalt laws of mental work”, *British Journal of Psychology*, 39, 175-83. The duration and degree of reliability of a given process of mental work are conditioned – according to laws analogous to Gestalt laws in the perceptual sphere – by the nature of the whole task into which this process fits as a part.
- 1951 “Edgar Rubin: 1886-1951”, *Psychological Review*, 58, 387-88. Rubin ‘like other experimental psychologists...was deeply impressed by the phenomenological point of view which at that time had pervaded the scientific atmosphere of Göttingen as a consequence of the spell cast by the ideas of Husserl. This outlook became apparent in his chief work, *Visuell wahrgenommene Figuren*’.
- 1952 “[Autobiography]” in E.G. Boring, et al., eds., *A History of Psychology in Autobiography*, 4, Worcester: Clark University Press, 189-211.
- Kaufmann, P. 1968 *Kurt Lewin. Une théorie du champ dans les sciences de l’homme*, Paris: Vrin.

- Kehr, T. 1915 "Allgemeines zur Theorie der Perzeption der Bewegung", *Archiv für die gesamte Psychologie*, 34, 106-120.
- Keiler, P. 1980 "Isomorphie-Konzept und Wertheimer-Problem: Beiträge zu einer historisch-methodologischen Analyse des Köhlerschen Gestaltansatzes, 1. Erkenntnistheoretische und seinslogische Implikationen des Isomorphie-Konzepts", *Gestalt Theory*, 2, 78-112. Köhler, in his 1920, defended the idea of an isomorphism between perceptual events and certain physical properties of processes in the sensory area of the central nervous system. This was Köhler's solution to Wertheimer's problem concerning the nature of those holistic brain processes which correspond, in the physiological sphere, to perceptual Gestalten (cf. Wertheimer, 1912). Keiler argues that (1) this purported solution has its roots in Machian philosophy, (2) that Köhler's attention is diverted (in Berkeleyan fashion?) too much towards physical patterns or structures and not enough towards the recognition by human subjects of "real objects in the practical sense", and (3) that Köhler is too wedded to a view of perception as solely receptive (in contrast, e.g., to the production theory of the Graz school but also to action-based theories of the Marxian sort).
- 1981 "*Idem.*, II. Anspruch und Wirklichkeit der Theorie der 'psychophysischen Gestalten' – Funktionales System und Wertheimer-Problem", *Gestalt Theory*, 3, 93-118. Keiler sees a tendency on Köhler's part to convert empirical problems into theoretical ones, lacking in testable content. He criticizes both Köhler's own later attempts to refine the isomorphism theory and the experiments of *Lashley et al.* designed to refute the theory. He goes on to present an alternative solution of the Wertheimer problem – the theory of the cortical functional systems developed by Luria and Leontiev, two members of the Vygotsky circle in Moscow. Keiler concludes by pointing to the influence of the Berlin Gestaltists on the Vygotsky circle, esp. of the ideas put for-

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ward by Koffka in his 1921 concerning the historical determination of the human psyche.

- 1982 "Idem., III. Die Gegenständlichkeit der Wahrnehmung als entwicklungsgeschichtliches Problem", *Gestalt Theory*, 4, 40-63. A satisfactory answer to the Wertheimer-problem presupposes the recognition that Gestalt perception is primarily perception of real, manipulable objects. Keiler closes his series of articles with a discussion of some specific features of man's practical and perceptual relations to the objects of his environment, special attention being drawn to the 'moulding (forming, shaping, structuring) aspect of human labour'. It is this aspect of labour, it is claimed, which is the 'objective basis of the permanent reproduction and further development of the faculty of "Gestalt"-perception as a general human faculty'.
- 1982a "Erwiderung auf einige von F. Hoeth, M. Ash und R. Arnheim gegen meinen Aufsatz 'Isomorphie-Konzept und Wertheimer-Problem' vorgebrachte Einwände", *Gestalt Theory*, 4, 249-66. Replies to critics, particularly concerning Keiler's claims as to a pronounced influence of Mach on Köhler.
- Kelley, H. H. 1971 "Causal Schemata and the Attribution Process", in E. E. Jones, *et al.*, *Attribution: Perceiving the Causes of Behaviour*, Morristown, N.J.: General Learning Press, 151-74. Systematic theory of attribution and causal inferences on the basis of a taxonomy of causal schemata.
- Kempski, J. von 1952 "Zur Logik der Ordnungsbegriffe, besonders in den Sozialwissenschaften", *Studium Generale*, 5, 205-18 (contains a generalized formal treatment of Ehrenfels' Gestalt qualities along the lines of Grelling and Oppenheim).
- Kenkel, F. 1913 "Beiträge zur Psychologie der Gestalt [ed. by K. Koffka], 1. Untersuchungen über

den Zusammenhang zwischen Erscheinungsgrösse und Erscheinungsbewegung bei einigen sogenannten optischen Täuschungen", *Zeitschrift für Psychologie*, 67, 385-449. Experimental analysis of Wertheimer's theory of the phi phenomenon. Contains the first systematic treatment of gamma movement, i.e. the sudden expansion which occurs when a visual object is abruptly presented on a homogeneous background. See review by Benussi 1914 and reply by Koffka 1915.

- Kennedy, J. M.
- 1973 "Misunderstandings of Figure and Ground", *Scandinavian Journal of Psychology*, 14, 207-209.
- 1974 "Perception, Pictures and the Etcetera Principle", in MacLeod and Pick, eds., 209-26. Study of ambiguity of line-figures and of different kinds of outlines and terminations. Kennedy argues that even figure-ground differentiation is ultimately a matter of pictorial form.
- 1974a *A Psychology of Picture Perception: Images and Information*, San Francisco: Jossey-Bass.
- 1975 "Depth at an Edge, Coplanarity, Slant Depth, Change in Direction and Change in Brightness in the Production of Subjective Contours", *Italian Journal of Psychology*, 2, 107-23. In the formation of subjective contours it is not necessary to have step-like changes in depth from one overlapping region to the background region. The contour can also correspond to a corner, or to sheaved regions. The shape of subjective contours is influenced by the groupings of the real lines and contours of stimulus displays and can be sharp or diffuse, in reflection of specific sorts of line terminations, changes in direction or gradual fading out of lines.
- 1976 "Attention, Brightness and the Constructive Eye", in M. Henle, ed. 1976, 33-48. On the ways in which attention can produce changes in the

- apparent brightness or brightness-distribution of a surface.
- 1978 "Illusory Contours not due to Completion", *Perception*, 7, 187-89.
- 1979 "Subjective Contours, Contrast and Assimilation", in C. F. Nodine and D. F. Fisher, eds., *Perception and Pictorial Representation*, New York: Praeger, 167-95.
- Kennedy, J. M. and Chattaway, L. D. 1975 "Subjective Contours, Binocular and Movement Perception", *Italian Journal of Psychology*, 2, 353-67.
- Kido, M. 1927 "[Awareness of Shape and Estimation of Relation in Perception]" (in Japanese), *Japanese Journal of Psychology*, 1, 262-82.
- 1930 "Gestalt-psychologie no gobyū" (in Japanese), *Tetugaku-Zasshi*, 45, 669-94.
- Kiesow, F. 1928 "Il principio della sintesi creatrice di G. [= W.] Wundt e la teoria della forma (Gestalt)", *Archivio Italiano di Psicologia*, 7, 61-79. Defence of Wundt's theory of creative synthesis against the Berlin Gestalt theory by an orthodox student of Wundt.
- King, S. M. see Helson and King.
- Kirchhoff, B. 1973 "Zum Strukturbegriff der Gestalt- und Ganzheitspsychologie", in W. D. Hund, ed., *Strukturalismus. Ideologie und Dogmengeschichte*, Darmstadt and Neuwied: Luchterhand, 161-79. General survey, serving as an introduction to extracts from Köhler, Wertheimer and Lewin.
- Kirschmann, A. 1895 "Der Metallglanz und die Parallaxe des indirekten Sehens", *Philosophische Studien*, 9, 147-87. Investigation of the quality-, intensity-, space- and time-relations which must come together to produce what we call the sheen of metals.



- 1900 *Conceptions and Laws in Aesthetics*, Toronto: University of Toronto Studies. Psychological Series, vol. 1, no. 4.
- 1906 "Normale und anormale Farbensysteme", *Archiv für die gesamte Psychologie*, 6, 397-424.
- 1908 "Über die Erkennbarkeit geometrischer Figuren und Schriftzeichen im indirekten Sehen", *Archiv für die gesamte Psychologie*, 13, 352-88.
- 1921 "Der Metallglanz und die Farbe der Metalle", *Archiv für die gesamte Psychologie*, 41, 90-116.
- Klein, J. see Wertheimer
- Kleint, H. 1925 "Über den Einfluß der Einstellung auf die Wahrnehmung", *Archiv für die gesamte Psychologie*, 51, 337-98.
- 1926 "Die psychischen Formen. Bemerkungen zur Theorie und Einteilung der psychischen Erscheinungen", *Archiv für die gesamte Psychologie*, 54, 469-517. Defence of a hierarchical taxonomy of types of appearances, arguing that the Gestalt structures to be found on different levels serve as elements for the structures on the next highest levels. Includes treatment of Stumpf, Ehrenfels, etc. on Gestalt qualities.
- 1940 "Versuch über die Wahrnehmung", *Zeitschrift für Psychologie*, 149, 31-82.
- Klimpfinger, S. 1933 "Untersuchungen über Wahrnehmungsgegenstände [E. Brunswik, ed.], IV. Über den Einfluß von intentionaler Einstellung und Übung auf die Gestaltkonstanz", *Archiv für die gesamte Psychologie*, 88, 551-98.
- Klix, F. 1975 "Der Gestaltbegriff und Aspekte der kognitiven Strukturbildung in der Wahrnehmung", in Ertel, *et al.*, eds., 187-99.
- Kluever, H. 1929 "German Psychology as a 'Natural Science'", in G. Murphy, ed., *An Historical Introduction to Modern Psychology*, London: Kegan Paul, Trench, Trubner, 417-42 (esp. 426-34).

- Knights, A. R.            1930    Review of Köhler 1929, *Mind*, 39, 360- 67.
- Knops, L.                 1947    "Contribution à l'étude de la 'naissance' et de la 'permanence' phénoménales dans le champ visuel", J. Nuttin, ed., *Miscellanea Psychologica Albert Michotte*. Louvain: Editions de l'Institut Supérieur de Philosophie, 562-610, repr. in Michotte et al. 1962, 299-346.
- Koch, S., ed.             1959    *Psychology: A Study of a Science*, New York: McGraw Hill.
- Koffka, K.                1909    "Experimental-Untersuchungen zur Lehre vom Rhythmus", *Zeitschrift für Psychologie*, 52, 1-109. Extended version of Dissertation, Berlin, 1908. Study of visually generated rhythm. Defends a conception of rhythm as a matter of grouping and presents an introspectionist account of the passage from perception of regularity to perception of groupings. Deals with the connection between rhythm and accentuation.
- 1911    "Über latente Einstellung", in F. Schumann, ed., *Bericht über den 4. Kongreß für experimentelle Psychologie in Innsbruck, 1910*, Leipzig: Barth, 239-41.
- 1912    "Ein neuer Versuch eines objektiven Systems der Psychologie", *Zeitschrift für Psychologie*, 61, 266-78. On the physiology of L. Edinger, which still sees physiological processes underlying consciousness in mechanistic terms.
- 1912a   *Zur Analyse der Vorstellungen und ihrer Gesetze. Eine experimentelle Untersuchung*, Leipzig: Quelle und Meyer. First part extracted in Mandler and Mandler 1964, 236-47. A study of types of presentation. Includes a defence of the Würzburg school against criticisms e.g. of Wundt and Titchener. Shows how functional concepts such as threshold, task, determining tendency, and so on, can bring real experiences under ordered law-like relations. In the Foreword Koffka writes: Stumpf 'gave the first impulse to my scientific thinking' (p.vi).

- Koffka, K. (cont.)
- 1913 "Beiträge zur Psychologie der Gestalt- und Bewegungserlebnisse. Einleitung", *Zeitschrift für Psychologie*, 67, 353-58. Seeks to describe the phenomena of experienced shape and movement and to discover law-like dependences between such phenomena and objective processes.
- 1914 "Psychologie der Wahrnehmung", *Die Geisteswissenschaften*, Jg. 1913/14, Heft 26, 711-16, Heft 29, 796-800. Statement of the new primacy of perception in scientific psychology: 'sensation is understood from the point of view of perception, instead of the other way round' (p.711). With Wertheimer 1912a, this work completes a transformation in perceptual theory prepared by E. Hering.
- 1915 "Beiträge zur Psychologie der Gestalt [ed. by K. Koffka], III. Zur Grundlegung der Wahrnehmungspsychologie. Eine Auseinandersetzung mit V. Benussi", *Zeitschrift für Psychologie*, 73, 11-90, repr. in Koffka, ed. 1919, 203-82, extracted in Ellis, ed., 371-78. A reply to Benussi 1914, including a detailed critical survey of Benussi's work (to 1914) and of the Graz production theory in general. Contains an early trace of the idea that there are real (physical) Gestalten, that the Gestalt idea is not at home only in the province of psychology. See pp. 38-42 above
- 1917 "Probleme der experimentellen Psychologie, I. Die Unterschiedsschwelle", *Die Naturwissenschaften*, 5, 1-5 and 23-28. Treatment of the difference threshold in terms of adaptation; an introduction to Gestalt ideas for natural scientists.
- 1919 "Probleme der experimentellen Psychologie, II. Über den Einfluß der Erfahrung auf die Wahrnehmung (behandelt am Problem des Sehens von Bewegung)", *Die Naturwissenschaften*, 7, 597-605. On the opposition between that which is 'structurally determined' in experience and that which is learned or acquired by practice.

- 1919a "Beiträge zur Psychologie der Gestalt [ed. by K. Koffka], IV. Zur Theorie einfachster gesehener Bewegungen. Ein physiologisch-mathematischer Versuch", *Zeitschrift für Psychologie*, 82, 257-92.
- 1920 Review of Linke 1918, *Zeitschrift für angewandte Psychologie*, 16, 102-17.
- 1921 *Die Grundlagen der psychischen Entwicklung. Eine Einführung in die Kinderpsychologie*, Osterwieck am Harz: Zickfeldt, 2nd ed., 1925; Eng. trans. *The Growth of the Mind. An Introduction to Child Psychology*, New York: Harcourt, Brace, London: Kegan Paul, 1924.
- 1921a Review of Rubin 1915, *Psychologische Forschung*, 1, 186-90.
- 1922 "Perception: An Introduction to the *Gestalt-Theorie*", *Psychological Bulletin*, 19, 531-85, repr. in T. Shipley, *Classics in Psychology*, New York: Philosophical Library, 1961, 1128-96.
- 1923 "Zur Theorie der Erlebnis-Wahrnehmung", *Annalen der Philosophie*, 3, 375-99.
- 1923a "Über Feldbegrenzung und Felderfüllung", *Psychologische Forschung*, 4 (Stumpf FS), 176-203. On the interdependence of the boundary conditions and the figural qualities of a phenomenal field.
- 1923b "Über die Untersuchungen an den sogenannten optischen Anschauungsbildern. Forschungsbericht", *Psychologische Forschung*, 3, 124-67.
- 1924 "New Experiments in the Perception of Movement", in C. S. Myers, ed., *Proceedings and Papers of the 7th International Congress of Psychology at Oxford, 1923*, Cambridge: Cambridge University Press, 369-73.
- 1924a "Introspection and the Method of Psychology", *British Journal of Psychology*, 15, 149-61.
- Sensations are real, but are not equivalent to the realities of our everyday phenomenal world. Being a reality, being a process producible under certain well

- established conditions, sensation is worthy of study. The investigation of sensation may even help us to understand better the laws of other and more natural phenomena, but it will not do so if the sensation is treated according to the teaching of traditional psychology, as a mental element. (p.158f.)
- 1924/25 "Psychical and Physical Structures", *Psyche* (London), 5, 80-85. On the empirical *realism* of Gestalt psychology.
- 1925 "Psychologie", in M. Dessoir, ed., *Lehrbuch der Philosophie*, vol. II, Berlin: Ullstein, 497-603. Perception, thought and behaviour belong to a single whole. Any separation of them from each other is artificial (esp. pp.583, 597).
- 1926 "Die Krisis in der Psychologie. Bemerkungen zu dem Buch gleichen Namens von Hans Driesch", *Die Naturwissenschaften*, 14, 581-86.
- 1927 "On the Structure of the Unconscious", in *The Unconscious. A Symposium*, E. Dummer, ed., New York: Knopf, 43-68.
- 1927a "Bemerkungen zur Denk-Psychologie", *Psychologische Forschung*, 9, 163-83. Reply to Selz (1926), who is accused of being still too mechanistic in his account of thought 'operations'. Also discussed are works on the thought-processes by Bühler, Benary and Koffka himself.
- 1927b "Psychologie der Wahrnehmung" in *Proceedings and Papers of the 8th International Congress of Psychology at Groningen, 1926*, Groningen: Noordhoff, 163-84
- 1928 "On Gestalt Theory", *The Smith Alumnae Quarterly*, Feb. 1928, 142-47.
- 1930 "Some Problems of Space Perception", in C. Murchison, ed., *Psychologies of 1930*, Worcester, Mass.: Clark University Press, 161-87.
- 1931 "Gestalt", *International Encyclopaedia of the Social Sciences*, E. R. A. Seligman, ed., New York: MacMillan, vol.6, 642-46. On Gestalt as

universal category, subsuming causality, substance, function, etc.

- 1931a "Die Wahrnehmung von Bewegung", in *Handbuch der normalen und pathologischen Physiologie*, A. Bethe, ed., 12/2, Berlin: Springer, 1166-1214.
- 1931b "Psychologie der optischen Wahrnehmung", *ibid.*, 1215-71.
- 1932 "[The Overcoming of Mechanistic and Vitalistic Tendencies in Modern Psychology]" (in Russian), *Psychologia*, 3, 59-69.
- 1933 Review of Tolman 1932, *Psychological Bulletin*, 30, 440-51.
- 1935 *Principles of Gestalt Psychology*, New York: Harcourt, Brace, and Comp., London: Kegan Paul, repr. 1963.
- 1935a "The Ontological Status of Value", in H. M. Kallen and S. Hook, eds., *American Philosophy Today and Tomorrow*, New York: Lee Furman, 274-309.
- 1935b "On Problems of Colour-Perception", *Acta Psychologica*, 1, 129-34. Colour, localization, shape and size must all be regarded as different aspects of one and the same process of organization.
- 1938 "Purpose and Gestalt. A Reply to Professor McDougall", *Character and Personality*, 6, 218-38.
- 1938a "The Law of Effect in Learning and its Interpretation", in *Onzième Congrès international de Psychologie à Paris*, Paris: Alcan, 57-68.
- 1940 "Problems in the Psychology of Art: A Bryn Mawr Symposium", *Bryn Mawr Notes and Monographs*, 9, 179-273.
- Koffka, K., ed. 1919 *Beiträge zur Psychologie der Gestalt*, Leipzig: Barth (reprint of parts I – IV of "Beiträge zur Psychologie der Gestalt" above).

- Koffka, K. and Harrower, M. R. 1931 "Beiträge zur Psychologie der Gestalt [ed. by K. Koffka], XXI and XXII. Colour and Organization, I and II", *Psychologische Forschung*, 15, 145-92, 193-275. See also Cermak and Koffka, and Harrower 1983.
- Kohler, I. 1951 *Über Aufbau und Wandlungen der Wahrnehmungswelt*, Österreichische Akademie der Wissenschaften, 227/1, Vienna: Rohrer; Eng. trans. as *The Formation and Transformation of the Perceptual World*, *Psychological Issues*, III, no.4, monograph 12, 1964. On the results of the Innsbruck experiments on distorted vision and perceptual habituation.
- 1953 "Grundsätzliches zur Geometrie der Sinnesräume", *Wiener Zeitschrift für Philosophie, Psychologie und Pädagogik*, 4, 224-31. That phenomenal space, in contrast to space in the sense of physics or mathematics, has a Euclidean structure.
- 1960 "Gestaltbegriffe und Mechanismus", in Weinhandl, ed., 211-24. On Gestalt theory, cybernetics and systems theory.
- 1962 "Interne und externe Organisation in der Wahrnehmung", *Psychologische Beiträge*, 6, 426-38.
- 1964 "The Formation and Transformation of the Visual World", *Psychological Issues*, 3, 28-46 and 116-39.
- 1965 "Gestaltreize, Reizgestalten, Gestaltungsreize – ein Beitrag zur Begriffserklärung", in H. Heckhausen, *Bericht über den 24. Kongreß der Deutschen Gesellschaft für Psychologie in Wien, 1964*, Göttingen: Hogrefe, 61-65. Are there Gestalt-stimuli which generate Gestalt perceptions in just the same unambiguous and unconditional manner as light, brightness, etc., according to the old psychology?
- 1966 "Die Zusammenarbeit der Sinne und das allgemeine Adaptationsproblem", in Metzger and

- Erke, eds., 616-55. On sensumotoric and intersensorial collaboration, with concluding remarks on adaptation.
- Köhler, W.                    1910    "Akustische Untersuchungen. I", Dissertation, Berlin (under Stumpf). *Zeitschrift für Psychologie*, 54, 241-89, also published as a Separatum, Leipzig: Barth, 1909.
- 1911    "Akustische Untersuchungen. II", *Zeitschrift für Psychologie*, 58, 59-140. On analogies between vowels and tones given in perception. Köhler cites Mach, Stumpf and Brentano in support of his attempts to do justice to the 'actual content' of perceived tones.
- 1913    "Akustische Untersuchungen. III und IV (Vorläufige Mitteilung)", *Zeitschrift für Psychologie*, 64, 92-105.
- 1913a    "Über unbemerkte Empfindungen und Urteilstäuschungen", *Zeitschrift für Psychologie*, 66, 51-80, Eng. trans. as "On Unnoticed Sensations and Errors of Judgment", in Köhler 1971, 13-39. Stumpf had defended the existence of unnoticed sensations on the basis of the non-transitivity of phenomenal identity. *a* can appear as equal to *b*, *b* as equal to *c*, but *a* as unequal to *c*. Stumpf argued that unnoticed sensational differences must lie behind the perceived qualities. Köhler argues that unnoticed sensations and similar notions are neither verifiable nor does belief in them stimulate productive research. He prefers to regard the Gestalten of equality and inequality as being themselves more complex in their objective structure. The paper includes a damaging critique of the constancy hypothesis, or the tendency to regard Perceptions and sensations as being directly and univocally determined by peripheral stimulation.
- 1915    "Akustische Untersuchungen. III", *Zeitschrift für Psychologie*, 72, 1-192.
- 1917    "Intelligenzprüfungen an Anthropoiden. I", *Abhandlungen der Königlich Preussischen Akademie der Wissenschaften* (Berlin), phys.-



Köhler, W. (cont.)

- math. Klasse, no.1. On the 'obvious difference of form' manifested in animal experiments between genuine (intelligent) achievements and mere 'imitations of chance'. In these terms apes are shown to have the ability to grasp the 'situational value' of an object such as a tool by a process of 'insight'.
- 1917a "Die Farbe der Sehdinge beim Schimpanse und beim Haushuhn", *Zeitschrift für Psychologie*, 77, 248-55.
- 1918 "Nachweis einfacher Strukturfunktionen beim Schimpanse und beim Haushuhn. Über eine neue Methode zur Untersuchung des bunten Farbensystems (Aus der Anthropoidenstation auf Teneriffa. IV)", *Abhandlungen der Königlich Preussischen Akademie der Wissenschaften* (Berlin), phys.-math. Klasse, no.2, 1-101, extracted in Ellis, ed., as "Simple Structural Functions in the Chimpanzee and in the Chicken", 217-227. On what kind of process do the memory-effects apparent in learning-phenomena depend? Köhler's experiments with light and dark grey stimulus-oppositions show that it is not absolute values which are learned, but rather contrastive configurations.
- 1920 *Die physischen Gestalten in Ruhe und im stationären Zustand. Eine naturphilosophische Untersuchung*, Braunschweig: Vieweg, republ., Erlangen: Philosophische Akademie, 1924, extracted in Ellis, ed., 17-54 and in Focht 1935, 91-106. Dedicated to Stumpf. Definitive statement of thesis of isomorphism between the physical and psychical structures involved in perceptual experiences. The lasting value of the work lies in its recognition that there is (something like) Gestalt structure in both spheres (that, for example, electrostatic charges satisfy the so-called Ehrenfels criteria), and that the contrast involved in the figure-ground phenomenon is fundamental to all experience.
- 1921 *Intelligenzprüfungen an Menschenaffen*, Berlin: Springer (2nd ed. of Köhler 1917), expanded ed. Heidelberg: Springer, 1963.

- 1922 "Zur Psychologie der Schimpansen", *Psychologische Forschung*, 1, 2-46.
- 1923 "Zur Theorie der stroboskopischen Bewegung (Im Anschluß an die Untersuchung Hartmanns)", *Psychologische Forschung*, 3, 397-406.
- 1923a "Zur Theorie des Sukzessivvergleichs und der Zeitfehler", *Psychologische Forschung*, 4 (Stumpf FS), 115-75. Cf. Lauenstein 1932.
- 1923b "Tonpsychologie", in G. Alexander and O. Marburg, eds., *Handbuch der Neurologie des Ohres*, Berlin/Vienna: Urban und Schwarzenberg, 1/1, 419-64.
- 1924 "The Problem of Form in Perception" (the paper itself is in German), in C. S. Myers, ed., *Proceedings of the 7th International Congress of Psychology*, Cambridge: Cambridge University Press, 22-28, simultaneously in *British Journal of Psychology*, 14, 1924. 262-68.
- 1924a "Gestaltprobleme und Anfänge einer Gestalttheorie", *Jahresbericht über die gesamte Physiologie und experimentelle Pharmakologie*, 3 (Bericht über das Jahr 1922), 512-39, repr. in *Gestalt Theory*, 5, 1983, 178-205, extracted in Ellis, ed. as "Some Gestalt Problems", 55-70. Local processes in the organism evince a clearly defined organization relative to the needs and conditions of the organism as a whole. The paper is an application of this idea to the problem of visual perception, drawing implications critical of Darwinian evolutionary theory, which Köhler sees as having too mechanistic a regard for organic forms taken in isolation from each other. Early statement of the universality of the Gestalt idea.
- 1925 "An Aspect of Gestalt Psychology", in C. Murchison, ed., *Psychologies of 1925*, Worcester, Mass.: Clark University Press (London: Oxford University Press, 1926), 163-95. Also in *The Pedagogical Seminary and Journal of Genetic Psychology*, 1925, 32, 691-723 and in Köhler 1971, 40-61.
- 1925a "Komplextheorie und Gestalttheorie. Antwort auf G. E. Müllers Schrift gleichen Namens",

- Psychologische Forschung*, 6, 358-416, extracted in Ellis, ed. as "Reply to G. E. Müller", 379-88. A critique of Müller 1923. Points to the unrealistic nature of Müller's attention theory, e.g. in relation to our perception of long words. Shows how experienced configurations are to a large extent independent of attention, that the structures we experience normally do not require attentive effort.
- 1925b *The Mentality of Apes*, New York: Harcourt, Brace and Comp. (London: Routledge and Kegan Paul), Eng. trans of Köhler 1917 by E. Winter.
- 1926 "Zur Komplextheorie", *Psychologische Forschung*, 8, 236-43.
- 1927 "Zum Problem der Regulation", [Wilhelm Roux'] *Archiv für Entwicklungsmechanik der Organismen*, 112 (Driesch Festschrift), 315-32. Eng. trans. in Köhler 1971, 305-26. On regulatory behaviour in organic and inorganic systems.
- 1928 "Carl Stumpf zum 21. April, 1928", *Kant-Studien*, 33, 1-3.
- 1928a "Zur Gestalttheorie. Antwort auf Herrn Rignanos Kritik", *Scientia*, 43, 309-22. Response to Rignano 1927. Reprinted with minor changes as first part of Köhler 1928b.
- 1928b "Bemerkungen zur Gestalttheorie. Im Anschluß an Rignanos Kritik", *Psychologische Forschung*, 11, 188-234, extracted in Ellis, ed. as "Reply to Eugene Rignano", 389-96. The second part is a response to Rignano 1928. Criticizes Rignano's pragmatic critique of Gestalt theory e.g. by pointing to the existence of non-utilitarian configuration-phenomena such as the shapes and figures we perceive in clouds or flames.
- 1929 *Gestalt Psychology*, New York: Liveright (London: Bell, 1930), revised version 1947. Distinguishes three principles of experienced order:

- I. Experienced order in space is always structurally identical with a functional order in the distribution of underlying brain processes.
- II. Experienced order in time is always structurally identical with a functional order in the sequence of correlated brain processes.
- III. Units in experience go with functional units in the underlying physiological processes. (Cf. Madden 1957)

The concept of Gestalt may be applied far beyond the limits of sensory fields. According to the most general definition of Gestalt, the processes of learning, of reproduction, of striving, of emotional attitude, of thinking, acting, and so forth, may be included as subject-matter of gestalt-theory insofar as they do not consist of independent elements, but are determined in a situation as a whole (p. 193, cf. revised version p. 105).

- 1929a "Ein altes Scheinproblem", *Die Naturwissenschaften*, 17, 395-401, Eng. trans. in Köhler 1971, 125-41. Why are the objects of the phenomenal world perceived as before us, outside of us, even though their perception depends upon processes inside of us in the central nervous system? Cf. F. Heider.
- 1930 "La perception humaine", *Journal de Psychologie normale et pathologique*, 27, 5-30. Eng. trans. as "Human Perception" in Köhler 1971, 142-67. Argues against the view that visual organization is to be interpreted as a product of previous experiences. Visual shape is not a sum or plurality of local sensations but a sensory unity to be interpreted as a product of both sensory and physiological organization.
- 1930a "Some Tasks of Gestalt Psychology", in C. Murchison, ed., *Psychologies of 1930*, Worcester, Mass.: Clark University Press, London: Oxford University Press, 143-60.
- 1930b "The New Psychology and Physics", *Yale Review*, 19, 560-76, repr. in Köhler 1971, 237-51.

- Köhler, W. (cont.)
- 1932 "Zur Boltzmannschen Theorie des zweiten Hauptsatzes", *Erkenntnis*, 2 (*Annalen der Philosophie*, 10), 336-53.
- 1933 "Zur Psychophysik des Vergleichs und des Raumes", *Psychologische Forschung*, 18, 343-60.
- 1933a *Psychologische Probleme* (revised and enlarged German version of Köhler 1929). Berlin: Springer.
- 1938 *The Place of Value in a World of Facts*, New York: Liveright (London: Kegan Paul, 1939); German trans. as *Werte und Tatsachen*, Berlin and Heidelberg: Springer, 1968. See Spiegelberg 1941. A 'phenomenological' analysis of the notion of *requiredness*, which Köhler employs as an equivalent of the notion of value (or of the analogue of force associated with value phenomena).
1. A datum, an entity or an act is required *within a context* of other data, entities or acts. This holds both for negative and for positive requiredness.
  2. Within the context in question requiredness is a *dependent* characteristic that has no existence of its own, apart from the entities that fit or do not fit each other in these contexts.
  3. All requiredness *transcends* from certain parts of a context to others of the same context. Like all other kinds of reference, it is in this sense a directed translocal trait, a vector, that cannot be split into bits which have a merely local existence.
  4. Requiredness differs strikingly from other forms of reference by its *demanding* character. It involves acceptance or rejection of the present status of the context in question, often more particularly, acceptance or rejection of some part by the remainder of the context. – This demanding character has degrees of intensity. The lower this intensity, the more will a condition of merely factual relation, juxtaposition, or sequence be realized. (pp.336f.)
- 1940 *Dynamics in Psychology. Vital Applications of Gestalt Psychology*, New York: Liveright (German trans.: *Dynamische Zusammenhänge in der Psychologie*, Berlin/Stuttgart: Huber, 1958). On the importance of functional dependence between the various dimensions of

experience and on the disparity between our assumptions about common intuitive phenomena (e.g. visual speed, orientation, retention and recall) and the factors on which such phenomena actually depend.

- 1941 "On the Nature of Associations", *Proceedings of the American Philosophical Society*, 84, 489-502. Experimental demonstration of the thesis that associations are not indifferent bonds between merely contiguous items.
- 1942 "Kurt Koffka: 1886-1941", *Psychological Review*, 49, 97-101.
- 1944 "Value and Fact", *Journal of Philosophy*, 41, 197-212, repr. in Köhler 1971, 356-75. Sketch of a phenomenology of value, criticizing value-relativism. How does value make itself present in common experience?
- 1944a "Max Wertheimer: 1880-1943", *Psychological Review*, 51, 143-46.
- 1947 *Gestalt Psychology. An Introduction to New Concepts in Modern Psychology*, New York: Liveright. Revised version of Köhler 1929.
- 1950 "Psychology and Evolution", *Acta Psychologica*, 7 (Révész Festschrift), 288-97, repr. in Henle, ed. 1961, 67-75. Defence of a 'Principle of Invariance in Evolution': because dynamic processes are pervasive throughout nature, all facts in human perception have certain characteristics which are unrelated to the specific make-up of human cells.

When man is thinking, he invariably follows, at least in part, *some* principles of action which hold everywhere, and can therefore not be suspected of being merely relative to his particular environment. To be sure, he would not exist at all if evolution had not occurred. At present, he would have little to think about if evolution had not given him sense organs, properly conducting nerve fibres, and many other particular devices. But even a modest nerve impulse which travels along one of those fibers obeys some general principles of action no less than the constraints to which it is subjected. Similarly, man's thinking must have some characteristics

- which are *not* in any sense determined by evolution and, for this reason, significant only in a relative sense. (pp.74f.)
- 1951 "Relational Determination in Perception", in L. A. Jeffress, ed., *Cerebral Mechanisms in Behavior: The Hixon Symposium*, New York: Wiley, London: Chapman and Hall, 200-43, repr. in Beardslee and Wertheimer, eds., 353-67. Study of figural after-effects.
- 1953 "The Scientists from Europe and their New Environment", in F. L. Neumann, *et al.*, *The Cultural Migration: The European Scholar in America*, Philadelphia: University of Pennsylvania Press, 112-37.
- 1958 "Perceptual Organization and Learning", *American Journal of Psychology*, 71, 311-15.
- 1959 "Gestalt Psychology today", *American Psychologist*, 14, 727-34.
- 1959a "Psychologie und Naturwissenschaft", in W. Metzger, ed., *Proceedings of the 15th International Congress of Psychology, Brussels 1957*, Amsterdam: North-Holland Publishing Co., 37-50, trans. in Köhler 1971, 252-73. On relations between psychology and the physiology of the brain.
- 1960 "The Mind-Body Problem", in S. Hook, ed., *Dimensions of Mind: A Symposium*, New York: New York University Press, 3-23; repr. in Köhler 1971, 62-82.
- 1963 "Gestalt Psychology in 1962", *Psychologia*, 6, 3-6.
- 1965 "Unsolved Problems in the Field of Figural After-Effects", *Psychological Record*, 15, 63-83. Includes a critique of 'refutations' of the field theory of cerebral integration by Lashley, *et al.* and by Sperry *et al.*
- 1966 "A Task for Philosophers", in P. K. Feyerabend and G. Maxwell, eds., *Mind, Matter and Method. Essays in Philosophy and Science in Honor of Herbert Feigl*, Minneapolis: University of

Minnesota Press, 70-91, repr. in Köhler 1971, 83-107. On the relation between the directly accessible world – which embraces both the self and the world of perception – and the world of nature as this is investigated by physicists, biologists, etc.

1967 “Gestalt Psychology”, *Psychologische Forschung*, 31, xviii-xxx, repr. in Köhler 1971, 108-22.

1969 *The Task of Gestalt Psychology*, Princeton: Princeton University Press, German ed., *Die Aufgabe der Gestaltpsychologie*, Berlin: de Gruyter, 1971. Late survey of much of Gestalt psychology. See, e.g., pp.88f. on inherited vs. learned traits. Köhler objects to calling the feeling of joy a product of inheritance by analogy with, say, eye and hair colour:

If, for one reason or another, the concentration of a certain chemical differs from one part of the tissue fluid to surrounding parts, diffusion will at once begin to equalize the concentration. This is dynamics. Under comparable conditions the same process would occur everywhere in inanimate nature. What have the genes to do with this? And what inheritance? (p.88f.)

1971 *The Selected Papers of Wolfgang Köhler*, M. Henle, ed., New York: Liveright. Includes complete bibliography to 1971, 437-49.

1971a “Direction of Processes in Living Systems”, in Köhler 1971, 327-34.

1971b “The Naturalistic Interpretation of Man (The Trojan Horse)”, in Köhler 1971, 337-55.

Köhler, W. and Adams, P. A.

1958 “Perception and Attention”, *American Journal of Psychology*, 71, 489-503, repr. in Henle, ed. 1961, 146-63. On the ways in which attention intensifies the process which underlies the perception of an object.

Köhler, W. and Dinnerstein, D.

1947 “Figural After-Effects in Kinaesthesia”, in *Miscellanea Psychologica Albert Michotte*, Louvain: Institut Supérieur de Philosophie, 196-220.



- Köhler, W. and Held, R. 1949 "The Cortical Correlate of Pattern Vision", *Science*, 110, 414-19.
- Köhler, W., Held, R. and O'Connell, D. N. 1952 "An Investigation of Cortical Currents", *Proceedings of the American Philosophical Society*, 96, 290-330.
- Köhler, W., Neff, W. and Wegener, J. 1955 *Currents of the Auditory Cortex of the Cat*, Philadelphia: Wister Institute of Anatomy and Biology.
- Köhler, W. and Restorff, H. von 1935 "Analyse von Vorgängen im Spurenfeld, II. Zur Theorie der Reproduktion", *Psychologische Forschung*, 21, 56-112.
- Köhler, W. and Wallach, H. 1944 "Figural After-Effects: An Investigation of Visual Processes", *Proceedings of the American Philosophical Society*, 88, 269-357.
- Kolers, P. A. 1963 "Some Differences between Real and Apparent Movement", *Vision Research*, 3, 191-206.
- 1972 *Aspects of Motion Perception*, New York: Pergamon Press. Thorough and imaginative survey, adducing experimental evidence to show that standard accounts of motion perception are inadequate. Draws sceptical conclusions regarding the possibility of a language of shape or pattern.
- Kopfermann, H. 1930 "Psychologische Untersuchungen über die Wirkung zweidimensionaler Darstellungen körperlicher Gebilde", *Psychologische Forschung*, 13, 293-364.
- Korte, A. 1915 "Beiträge zur Psychologie der Gestalt- und Bewegungserlebnisse [K. Koffka, ed.], II. Kinematoskopische Untersuchungen", *Zeitschrift für Psychologie*, 72, 193-296. Includes the statement of a number of laws held to govern the reciprocal dependence relations between stimulus, intensity, separation, exposure time, etc., in apparent motion.
- Korte, W. 1923 "Über die Gestaltauffassung im indirekten Sehen", *Zeitschrift für Psychologie*, 93, 17-82. Follows on from Kirschmann 1908 and from Erdmann and Dodge, on the importance for a

- theory of reading of indirect attention and of the reader's non-summative grasp of the text-material via a springing from fixation point to fixation point.
- Kössler, W. 1949 *Die Rolle des Beziehungsreichtums bei der Gestaltwahrnehmung. Der Einfluß verschiedener Umgebungsbedingungen auf die Unerschiedsempfindlichkeit für Distanzen.* (Dissertation, Vienna).
- Kraus, O. 1921 "Zur Debatte über die Gestaltpsychologie. Einige kritische Darlegungen". *Lotos* (Prague), 69, 233-42. Critical comments provoked by Drexler 1921. Kraus identifies Gestalten with relations, dismissing claims to originality both of Ehrenfels' Gestalt theory and of the work of the Berlin school. The concept of a whole's being greater than the sum of its parts goes back to classical times.
- Krauss, S. 1928 "Über Arbeiten aus dem Gebiet der Farbenwahrnehmung. Ein Wort für die Verbindung von Phänomenologie und Organologie". *Psychologische Forschung*, 11, 157-70. Reply to Katz.
- Krech, D. 1950 "Dynamic Systems, Psychological Fields, and Hypothetical Constructs". *Psychological Review*, 57, 283-90.
- 1950a "Dynamic Systems as Open Neurological Systems". *Psychological Review*, 57, 345-61.
- Krech, D. and Crutchfield, R. S. 1959 *Elements of Psychology*. New York: Knopf (textbook based in part on Gestalt psychology and on the work of Lewin).
- Krechevsky, J. see Duncker and Krechevsky.
- Kreibitz, J. 1902 *Psychologische Grundlegung der Werttheorie*. Vienna: Hölder. Especially the discussion of the foundations of aesthetics on the basis of the theory of Gestalt-qualities (pp. 160f.).
- 1909 *Die intellektuellen Funktionen. Untersuchungen über Grenzfragen der Logik, Psychologie und Erkenntnistheorie*. Vienna and Leipzig: Hölder.

'A thing is given in perception as the Gestalt quality of a sum of perceived characters' (p.115). This theory, which is influenced by the production theory of the Graz school, is extended to yield an account of event-perception, motion and states of mind. and is shown to imply a critique of the traditional concept of substance.

- 1911 "Über Wahrnehmung", *Sitzungsberichte der Kaiserlichen Akademie*, Vienna, 168, whole no. 6, 1-37. Perceptual processes are divided into three components:  
 I. sensation  
 II. conception (Auffassung)  
     (a) as a matter of will or attention  
     (b) as a matter of thought or judgment  
     (both existential and qualitative)  
 III. grasping of Gestalt qualities.
- Kries, J. von 1898 *Über die materiellen Grundlagen der Bewußtseinserscheinungen*, Freiburg i. Br.: Hochreuther (2nd ed., Tübingen: Mohr, 1901).
- Krueger, F. 1899 Review of Cornelius 1897, *Vierteljahrsschrift für wissenschaftliche Philosophie*, 23, 117-24.
- 1905-10 "Die Theorie der Konsonanz", *Psychologische Studien*, 1, 305-87, 2, 205-55, 4, 201-82, 5, 294-411. Critique of Stumpf and Lipps.
- 1924 "Der Strukturbegriff in der Psychologie", in K. Bühler, ed., *Bericht über den 8. Kongreß für experimentelle Psychologie in Leipzig, 1923*, Jena: Fischer, 31-56 and in Krueger 1953, 125-45. The notion of a dispositional structure is distinguished from that of an actual complex Gestalt.
- 1926 "Zur Einführung – Über psychische Ganzheit", *Neue Psychologische Studien*, 1 (= *Komplexqualitäten, Gestalten und Gefühle*, F. Krueger, ed.), 1-121 and in Krueger 1953, 33-124. On the peculiarly German origins of the Gestalt idea, from Böhme's doctrine of the divine whole through Leibniz, Herder, and especially Kant, to Fichte, Hegel and Schopenhauer.

- 1928 "The Essence of Feeling", in *The Wittenberg Symposium – Feelings and Emotions*, Worcester, Mass.: Clark University Press, 58-88.
- 1948 *Lehre von dem Ganzen. Seele, Gemeinschaft und das Göttliche* (Beiheft zur *Schweizerischen Zeitschrift für Psychologie und ihre Anwendungen*, 15), Bern: Huber.
- 1953 *Zur Philosophie und Psychologie der Ganzheit. Schriften aus den Jahren 1918-1940*, ed. E. Heuss, Berlin/Göttingen/Heidelberg: Springer. At the centre of Krueger's approach to Gestalt structure is the notion of a 'complex-quality', illustrated for example by the characteristic feeling-tone which one experiences (at least according to the Kruegerian view) on listening, say, to a piece of music in A minor. Complex-qualities, unlike Ehrenfels' Gestalt qualities, are not articulated into underlying elements, have no determinate boundaries or contours, are 'diffuse' and physiognomic, and are seen as having a primacy in both ontogenetic and phylogenetic development (as scientific ideas, e.g., begin as vague impressions and are only later clarified in a theoretical way).
- A full Krueger bibliography to 1934 is to be found in *Neue Psychologische Studien*, 12 (Krueger Festschrift).
- Kubo, S. 1930 [*Gestalt Psychology*] (in Japanese), Tokyo: Chubunkan.
- 1931 "Über die phänomenalen Veränderungen der optischen Scheinbewegungen, die in die Rhythmusgestalt eingebettet sind", *Japanese Journal of Psychology*, 6, 477-541.
- Kubovy, M. and Pomerantz, J., eds. 1981 *Perceptual Organization*, Hillsdale, N.J.: Erlbaum.
- Künnapas, T.M. 1948 "Experimenteller Beitrag zum Problem der Transponierung der Handlungsgestalten", (Lic. Thesis, Stockholm, mimeographed).
- 1959 *Visual Field as a Frame of Reference*, Stockholm: Almqvist and Wiksell (19pp.).

- Künnapas, T. M. and Ekman, G. 1962 "Measurement of Aesthetic Value by 'Direct' and 'Indirect' Methods", *Scandinavian Journal of Psychology*, 3, 33-39.
- Kützner, O. 1916 "Kritische und experimentelle Beiträge zur Psychologie des Lesens mit besonderer Berücksichtigung des Problems der Gestaltqualität", *Archiv für die gesamte Psychologie*, 35, 157-251.
- Lach, R. 1921 "Gestaltungsbestimmtheit und Gestaltmehrdedeutigkeit in der Musik (Bei- und Nachträge zu Höfler)", *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften*, Vienna, 196/I, pp.96-148. Musicological appendix to Höfler 1921.
- LaFave, L. 1969 "The Holism-Atomism Controversy: Gestalt Psychology Confronts the Revised Law of Inverse Variation", *Psychological Reports*, 24, 699-704. Members added to a class may act as stimuli suggesting to a subject hitherto unnoticed properties common to the original members. However, as the membership of a class increases the number of properties its members in fact share in common decreases (= revised law of inverse variation). The unnoticed properties are psychologically but not objectively new. See criticism by I.M. Copi and author's reply, *idem*, 25, 302-18.
- Lagercrantz, E. see Werner and Lagercrantz.
- Lakoff, G. 1977 "Linguistic Gestalts", in W. A. Beach, S. E. Fox and S. Philosph, eds., *Papers from the 13th Regional Meeting*, Chicago: Chicago Linguistic Society, 236-87. Defends the thesis that, because the use and understanding of language always takes place against a certain background of experience, the subject-matter of linguistics ought properly to be structures comprehending not merely linguistic elements but also those other relevant factors which are organized together with these. The fact that such factors may share in common underlying non-linguistic properties may serve to explain surface

linguistic phenomena which would otherwise seem arbitrary. Lakoff calls such structures 'linguistic gestalts', and he gives the following tentative summary of their characteristic marks:

1. Gestalts are at once holistic and analyzeable. They have parts, but the wholes are not reducible to the parts. They have additional properties by virtue of being wholes, and the parts may take on additional significance by virtue of being within those wholes.
2. Gestalts may be analyzeable into parts in more than one way, depending on the point of view that one takes...
3. Gestalts have internal relations among parts, grouped by type. Part of what makes a gestalt is that the parts in it relate to one another in certain ways by virtue of being in the gestalt...
4. Gestalts may bear external relations to other gestalts. They may be viewed as instances of other gestalts or mapped onto other gestalts in some other way. In such mappings, the parts of one gestalt get mapped onto parts of other gestalts. As a result of such mappings, a gestalt may 'inherit' properties and inherent relations from a gestalt that it gets mapped onto. There are various types of mappings, among them inferential mappings (which are transitive), and mappings that can represent arbitrary, symbolic, or cultural associations (which are typically not transitive).
5. External relations that gestalts bear to other gestalts are properties of the gestalts as a whole. Different external relations may be borne from different points of view.
6. Mappings of one gestalt onto another may be partial. Gestalts may also bear partial similarities to one another, depending on how closely they match.
7. Gestalts may be embedded inside other gestalts, and may take on new properties as a result of such embeddings.
8. One property a gestalt may bear is that of opposition to another gestalt. That is, one of the defining characteristics of a gestalt may be that it is the 'opposite' of some other gestalt.
9. Certain properties of gestalts may be segregated off as BACKGROUND properties. Opposites will typically share the same BACKGROUND properties.
10. Gestalts are structures that are *used in processing*, whether language processing, thought processing, perceptual processing, motor activity, or whatever.
11. Processes themselves may be viewed as gestalts.

12. An analysis in terms of gestalts does not necessarily make any claims as to the *ultimate* parts into which something can be decomposed. Since any such analysis is done by human process, it will be limited, guided by resources, purposes, and viewpoints. Given different resources, purposes and viewpoints, we can expect analyses in differing degrees of detail, or even into different parts. In semantics, for example, there need not be an analysis into ultimate, atomic predicates.

13. Gestalts may interact with each other.

14. Gestalts must distinguish prototypical from nonprototypical properties.

15. Gestalts are often cross-modal. That is, their properties may be of various types. Sensori-motor gestalts involve both perceptual properties and motor properties. Linguistic gestalts will involve a number of types of properties – grammatical, pragmatic, semantic, phonological, functional. (p.246f.)

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| Lakoff, G. and Johnson, M.                 | 1980 | <i>Metaphors We Live By</i> , Chicago and London: University of Chicago Press. Esp. ch.15: "The Coherent Structuring of Experience: Experiential Gestalts and the Dimensions of Experience." Not only language, but experience as a whole, is organized in a Gestalt-like way. Understanding takes place in terms of entire domains of experience, not in terms of isolated concepts. Each domain of experience 'is a structured whole... that is conceptualized as what we have called an experiential gestalt' (p.117). The authors show that the structures involved are in some sense natural, and they indicate how they may interact or effect each other in different ways, how they manifest distinct dimensions of independent variation. |
| Landaburu, L.                              | 1946 | "El delito como estructura" (Gestalt theory of crime), <i>Crim Rev</i> (sic), 12. [Reference from Metzger 1966. Untraced]  |
| Langhoff, S.                               | 1980 | <i>Gestaltlinguistik. Eine ganzheitliche Beschreibung syntaktisch-semantischer Sprachfunktionen am Beispiel modaler Infinitivkonstruktionen des Deutschen und Englischen</i> , Bern/Frankfurt/Cirencester: Lang.   |
| Lashley, K. S., Chow, K. L. and Semmes, J. | 1951 | "An Examination of the Electrical Field Theory of Cerebral Integration", <i>Psychological Review</i> , 58, 123-36. Seminal critique of Köhler's  |

- cortical theory of Gestalt perception, directed specifically against Köhler and Held 1949. For Köhler's reaction see his 1965. See also Keiler 1981, pp. 106ff. for a (partial) defence of Köhler.
- Lauenstein, L. 1938 "Über räumliche Wirkungen von Licht und Schatten", *Psychologische Forschung*, 22, 267-319.
- Lauenstein, O. 1932 "Ansatz zu einer physiologischen Theorie des Vergleichs und der Zeitfehler", *Psychologische Forschung*, 17, 130-77. Our comparison of phenomena appearing at different times is achieved via a cumulation of traces of material from successive processes. Such material cumulates in temporal sequences in such a way as to form an integrated system. See the discussion in Köhler 1938, 229f. and 264ff.
- 1943 "Schattencharakter und Dingcharakter", *Zeitschrift für Psychologie*, 154, 203-14.
- Leeper, R. 1943 *Lewin's Topological and Vector Psychology. A Digest and a Critique*, Eugene, Oregon: Oregon University Press. Well-written summary, very sympathetic to Lewin. Contains a useful discussion of Lewin's concept of direction.
- Legrenzi, P. 1975 *Forma e contenuti dei processi cognitivi*, Bologna: Il Mulino.
- 1975a "The Description of Being Observed: Linguistic Factors and Eye-Contact Judgments", in Flores d'Arcais, ed., 329-43. Includes a criticism of treatments of perception by linguistic philosophers, whose work is marred by a neglect of experimental work on perception and by a tendency to base analyses on dubious general theories (usually the theory of sense data). Consider for example the specific phenomenon of awareness that one is 'being observed': here experimental support can be found for Wittgenstein's stressing the importance for the obtaining of information from the observer's gaze patterns, of different sorts of cues derived from his seeing/looking behaviour.



- 1978 "Rilettura di termini della gestalt in termini di psicologia cognitivista", in Kanizsa and Legrenzi, eds., 165-73. Development of Wertheimer's work on the productivity of the syllogism.
- Lehmann, F. E. 1933 "Das Prinzip der kombinatorischen Einheitsleistung in der Biologie, im besonderen in der experimentellen Entwicklungsgeschichte und seine Beziehung zur Gestalttheorie", *Biologisches Zentralblatt*, 53, 471-96.
- Leichtman, M. 1972 *Conceptions of the History of Psychological Systems. An Examination of Alternative Models of Inquiry and their Application to the Development of Gestalt Psychology*. (Dissertation, Clark University), Ann Arbor: University Microfilms.
- 1979 "Gestalt Psychology and the Revolt Against Positivism", in A. Buss, ed., *Psychology in Social Context*, New York: Irvington, 47-75.
- Leinfellner, W. 1966 "Logische Analyse der Gestalt. Logik und Gestaltpsychologie", *Studium Generale*, 19, 219-35.
- Leonard, H. S. 1939 "Gestalt Psychology and Physicalism", pre-printed for the members of the 5th International Congress for the Unity of Sciences, Cambridge (scheduled to appear in *Erkenntnis*, 9, 57-62). Somewhat trivial project of translating three central theses of Gestalt psychology into the 'formal mode of speech' in the manner of logical positivism. The three theses are psychophysical parallelism, the validity of introspectionism, and holism, though the pre-printed version concentrates exclusively on the first.
- Levelt, W. J. M. 1962 "Motion Braking and the Perception of Causality", in Michotte *et al.* 1962, 244-58. Experiments on impressions of braking suggest an objective criterion which would justify the distinction between responses corresponding to specific *impressions* of causation and responses corresponding to *inferences*.

- Levy, E.                    1981    "A Problem in Thinking", *Psychological Reports*, 49, 219-36.
- 1981a    "'Syllogism in Productive Thinking' by Max Wertheimer", *Psychological Reports*, 49, 395-412.
- Lewin, K.                    1917    "Kriegslandschaft", *Zeitschrift für angewandte Psychologie*, 12, 440-47. Early discussion of figure-ground structures in connection with camouflage.
- 1917a    "Die psychische Tätigkeit bei der Hemmung von Willensvorgängen und das Grundgesetz der Assoziation", *Zeitschrift für Psychologie*, 77, 212-47.
- 1923    "Über die Umkehrung der Raumlage auf dem Kopf stehender Worte und Figuren in der Wahrnehmung", *Psychologische Forschung*, 4 (Stumpf Festschrift), 210-61.
- 1925    "Untersuchungen zur Handlungs- und Affektpsychologie [K. Lewin, ed.], I. Vorbemerkungen über die psychischen Kräfte und Energien und über die Struktur der Seele", *Psychologische Forschung*, 7, 294-329. Also publ. with Part II as Separatum, Berlin: Springer, 1926. First part translated as "Comments Concerning Psychological Forces and Energies, and the Structure of the Psyche" in Rapaport, ed. 1951, 76-94. On psychical *tensions* (as opposed to mere connections of psychical events) as the causes of activity. Such tensions are typically brought about by the flow of experienced events in the perceptual field. The second part is trans. as "On the Structure of the Mind" in Lewin 1935, 43-65.
- 1926    "Untersuchungen zur Handlungs- und Affektpsychologie [K. Lewin, ed.], II. Vorsatz, Wille und Bedürfnis", *Psychologische Forschung*, 7, 330-85, extracted with Lewin 1925 in Ellis, ed., as "Will and Needs", 283-99; Eng. trans. by D. Rapaport, "Intention, Will and Need", in Rapaport, ed., 1951, 95-153. See especially the treatment of actions as Gestalten.

- Lewin, K. (cont.)
- 1927 "Gesetz und Experiment in der Psychologie", *Symposion*, 1, 375-421, and repr. in Kurt Lewin *Werkausgabe*, vol.1 (Lewin 1981ff.), 279-316.
- 1929 "Gestalttheorie und Kinderpsychologie", *Werdendes Zeitalter*, 12, 544-50.
- 1934 "Der Richtungsbegriff in der Psychologie. Der spezielle und allgemeine hodologische Raum", *Psychologische Forschung*, 19, 249-99.
- 1935 *A Dynamic Theory of Personality*, New York: McGraw-Hill.
- 1936 *Principles of Topological Psychology*, New York and London: McGraw-Hill. Attempts to employ mathematical concepts of closure, boundary, connectedness, etc., to characterize the space of needs, desires and experienced obstacles, of psychological subjects. Defines Gestalt as 'A system whose parts are dynamically connected in such a way that a change of one part results in a change of all other parts'.
- 1938 *The Conceptual Representation and Measurement of Psychological Forces*, *Contributions to Psychological Theory*, vol. 1, no.4.
- 1943 "Defining the 'field at a given time'", *Psychological Review*, 50, 292-310, repr. in Marx, ed., 299-315.
- 1948 *Resolving Social Conflicts*, G. W. Lewin, ed., New York: Harper. Essays on group dynamics.
- 1951 *Field Theory in Social Science. Selected Theoretical Papers*, ed. D. Cartwright, New York: Harper.
- 1981ff. *Werkausgabe*, C.-F. Graumann, ed., vols. 1 and 2, *Wissenschaftstheorie I and II*, ed. A. Métraux, 1981/83; vol.4, *Feldtheorie*, C.-F. Graumann, ed., 1982; vol.6, *Psychologie der Entwicklung und der Erziehung*, E. Weinert and H. Gundlach, eds., 1982, Bern: Huber and Stuttgart: Klett-Cotta.

- Lian, A. 1981 *The Psychological Study of Object Perception. Examination of Methodological Problems and a Critique of Main Research Approaches*, London: Academic Press (esp. treatment of the perception of material objects and of the problem of constancy).
- Lichtenstern, K. A. R. von 1925/26 "Versuch einer Lösung des Substanzproblems auf Grund der Gestalttheorie", *Annalen der Philosophie und philosophischen Kritik*, 5, 121-28. The world is not divided autonomously into Gestalten, but is drawn together into different Gestalten on different levels in reflection of varying points of view. Only the world as a whole can be awarded the status of substance. (The author is the nephew of von Ehrenfels.)
- 1966 "Ontologische Probleme der Zeit und der Zeitgestalten", in Weinhandl, ed., 225-34. Evolution as the bringing forth of ever higher Gestalten.
- Liebmann, S. 1927 "Über das Verhalten farbiger Formen bei Helligkeitsgleichheit von Figur und Grund", *Psychologische Forschung*, 9, 300-53.
- Liel, W. see Benussi and Liel.
- Lindemann, E. 1922 "Beiträge zur Psychologie der Gestalt [ed. by K. Koffka], VII. Experimentelle Untersuchungen über das Entstehen und Vergehen von Gestalten", *Psychologische Forschung*, 2, 5-60, extracted in Ellis, ed., as "Gamma Movement", 173-81. Continuation of investigations in Kenkel 1913.
- Lindenfeld, D. F. 1980 *The Transformation of Positivism: Alexius Meinong and European Thought*, Berkeley: University of California Press.
- Lindworsky, J. 1921 "Beiträge zur Lehre von den Vorstellungen", *Archiv für die gesamte Psychologie*, 42, 91-96.
- 1924 "Revision einer Relationstheorie", *Archiv für die gesamte Psychologie*, 48, 248-89. Challenges the opposition between thinking and the more intuitive and associative processes of the psyche.

- 1926 *Theoretische Psychologie im Umriss*, Leipzig: Barth; Eng. trans. as *Theoretical Psychology*, by H. R. DeSilva, St. Louis: Herder, 1926. Attempts to reduce all knowledge to knowledge of self, of elementary sensations, and of feelings.
- 1934 "Zu den Grundfragen der Gestaltpsychologie". *Stimmen der Zeit*, 64, 80-90.
- 1934a "Consciousness versus Mechanism in the Theory of Perception", *Journal of General Psychology*, 11, 369-78.
- Line, W. 1931 "Gestalt Psychology in Relation to other Psychological Systems", *Psychological Review*, 38, 375-91.
- Linke, P. F. 1907 "Die stroboskopischen Täuschungen und das Problem des Sehens von Bewegung", *Psychologische Studien*, 3, 393-545. First to point out that apparent visual movement can take place even though the stimulus objects differ in form.
- 1912 *Die phänomenale Sphäre und das reale Bewußtsein. Eine Studie zur phänomenologischen Betrachtungsweise*, Halle: Niemeyer.
- 1915 "Das paradoxe Bewegungsphänomen und die 'neue' Wahrnehmungslehre", *Archiv für die gesamte Psychologie*, 33, 261-65. Criticizes the early Gestalt theorists' view that spatial configurations can act as stimuli: 'Stimuli – or so I had thought – are physical or physiological processes, not geometrical formations' (p.264).
- 1916 "Phänomenologie und Experiment in der Frage der Bewegungsauffassung", *Jahrbuch für Philosophie und phänomenologische Forschung*, 2, 1-20. On the role of *identification* (of some moving thing) in the perception of motion.
- 1918 *Die Grundfragen der Wahrnehmungslehre. Untersuchungen über die Bedeutung der Gegenstandstheorie und Phänomenologie für die experimentelle Psychologie*, Munich: Reinhardt, 2nd ed., with an epilogue on

"Gegenstandsphänomenologie und Gestalttheorie", 1929. An important study confronting Berlin Gestalt psychology with the philosophical and psychological theories of Brentano, Stumpf, Husserl and Meinong. Linke takes up a position which is in many respects midway between those of Benussi and Koffka. There is no perceptual *Gestaltung* (forming) but only *Umgestaltung* (re-forming), and the latter is a stimulus-free psychic process that is conditioned by mind-independent structural laws. Linke rejects the very idea of Wertheimer's phi-phenomenon, since perceived motion is impossible without perception of the moving object. The so-called pure movement is 'merely presented' ('*bloß vorgestellt*'), as one may be psychically compelled to present to oneself an array of dots as e.g. a triangle.

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| Lipmann, O. | 1923 | "Bemerkungen zur Gestalttheorie". <i>Archiv für die gesamte Psychologie</i> , 44, 371-78. On subjective (inner) and objective (outer) Gestalten and on the capacity of the subject to constitute as Gestalten sums of objective elements which do not, objectively, form a Gestalt.  |
| Lipps, T.   | 1892 | "Optische Streitfragen". <i>Zeitschrift für Psychologie und Physiologie der Sinnesorgane</i> , 3, 493-504. Includes treatment of Brentano 1892.  |
|             | 1898 | "Raumästhetik und geometrisch-optische Täuschungen". <i>Zeitschrift für Psychologie und Physiologie der Sinnesorgane</i> , 18, 405- 41, and as Separatum, Leipzig: Barth, 1897.  |
|             | 1900 | "Zu den 'Gestaltqualitäten'". <i>Zeitschrift für Psychologie und Physiologie der Sinnesorgane</i> , 22, 383-85. Reply to Cornelius (1900), who had defended a view of Gestalt qualities as mental contents. Lipps argues that the similarity of melodies and like formations can be explained in terms of the similarity of underlying psychic processes or of excitation states or of the |

relations between them. He dismisses Cornelius' suggestion that feelings might be classified as Gestalt qualities, pointing out that feelings are qualities of the ego, not qualities of any objectual contents of consciousness.

- 1902 *Einheiten und Relationen. Eine Skizze zur Psychologie der Apperzeption*, Leipzig: Barth.
- 1902a "Zur Theorie der Melodie", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 27, 225-63.
- 1905 "Zur Verständigung über die geometrisch-optischen Täuschungen", *Zeitschrift für Psychologie*, 38, 241-58.
- 1913 *Zur Einfühlung*, Leipzig: Engelmann. Puts forward an empathy-theory of Gestalt presentation according to which the Gestalt-quality of the perceived object is actually a matter of feelings of the observer which he somehow reads into the object itself.

A complete Lipps bibliography is in preparation by N. Bokhove (Utrecht).

London, I. D.

- 1944 "Psychologists' Misuse of the Auxiliary Concepts of Physics and Mathematics", *Psychological Review*, 51, 266-91. Harsh criticism of Lewin's so-called 'topological psychology' to the effect that Lewin has adopted merely the shadow and not the substance of a mathematical theory. The majority of London's points are well-taken, though occasionally exaggerated – for example where he castigates Lewin for employing topology over a finite domain (288f.).

Lorenz, K.

- 1951 "The Role of Gestalt Perception in Animal and Human Behaviour", in Whyte, ed., 157-78.
- 1959 "Gestaltwahrnehmung als Quelle wissenschaftlicher Erkenntnis", *Zeitschrift für experimentelle und angewandte Psychologie*, 6 (Bühler Festschrift), 118-65, repr. in *Über tierisches und menschliches Verhalten. Gesammelte Abhandlungen*, vol.2, Munich:

- Piper, 12. ed., 1981, 255-300; Eng. trans. in *General Systems Yearbook*, 7, 1962, 37-57.
- Löwi, M. 1927 *Zum Problem der Ganzheit. Synthesis und System*, Breslau: Trewendt und Granier, (Dissertation, Breslau).
- Lübbe, H. 1972 "Positivismus und Phänomenologie: Mach und Husserl", in *Bewußtsein in Geschichten: Studien zur Phänomenologie der Subjektivität, Mach – Husserl – Schapp – Wittgenstein*, Freiburg: Alber, 33-62. Eng. trans. in T. Luckmann, ed. *Phenomenology and Sociology*, Harmondsworth: Penguin, 1978.
- Luccio, R. 1983 "La percezione di numerosita", *Storia e Critica della Psicologia*, 4, 215-83. Useful synoptic treatment. See also Kanizsa and Luccio.
- Luchins, A. S. 1942 "Mechanization in Problem Solving: The Effect of 'Einstellung'", *Psychological Monographs*, 54.6 (whole no. 248).
- 1951 "An Evaluation of Some Current Criticisms of Gestalt Psychological Work on Perception", *Psychological Review*, 58, 69-95.
- 1952 "On the Relationship between Figural After-Effects and the Principle of Prägnanz", *American Journal of Psychology*, 65, 16-26.
- 1961 "Some Aspects of Wertheimer's Approach to Personality", *Journal of Individual Psychology*, 17, 20-26.
- 1968 "Max Wertheimer", *International Encyclopedia of the Social Sciences*, 16, 522-26.
- 1975 "The Place of Gestalt Theory in American Psychology. A Case Study", in Ertel, *et al.*, eds., 21-44.
- 1985 "Max Wertheimer: His Life and Work during 1912-1919", *Gestalt Theory*, 7, 3-28.
- Luchins, A. S. and Luchins, E. H. 1953 "The Satiation Theory of Figural After-Effects and Gestalt Principles of Perception", *Journal of General Psychology*, 49, 3-29.



- 1953a "The Satiation Theory of Figural After-Effects and the Principle of Prägnanz", *Journal of General Psychology*, 49, 185-99.
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1. The manifold of stimuli reproduces itself [*bildet sich ab*] in the manifold of *members* of the unified whole, as

in the case of a figure made of points (e.g. a domino), simple tone-series, and certain chords...

2. The stimulus manifold leads to a formation which is itself not articulated, even though often clearly formed and set off externally; such a formation however still contains a manifold of *loci*, which corresponds, at least approximately, to the manifold of stimuli, as in the case of a plane figure (a segment of a circle) or the howl of a siren, etc. This second sort of relation between single stimulus and locus holds also *within the individual members* of an articulated whole, provided the latter are not unextended points; this fact has been insufficiently attended to in discussions of perceptual psychology.

The first two sorts of whole have this in common, that the absence of a stimulus component brings about a gap or discontinuity at a certain place in the intuitive whole and, connected with this, the stimulus effects make themselves felt in the first place side by side or successively within the unified whole.

3. There arises a formation as in 2., but the manifold of stimuli is not reproduced therein; the individual components are rather more or less intensively involved in the shaping of the *character* of the whole, in such a way that if one is missing or another is added then this brings about changes in this character, though no gap or discontinuity arises. The primary example is the musical sound. This shows particularly clearly that certain components can be more significant for the whole than others, that one of these in certain circumstances 'founds' [*begründet*] the whole, while the others merely add 'colour', and that with the addition of certain further components that which had served as founding component can sink to the level of mere colouring. – This third type of relation can occur together in the same whole with the first two types in the most varied ways or (under constant external conditions) alternate with them, as is sufficiently well-known e.g. from the case of the hearing of partial tones within what at first seems to be an intuitively unified sound...

4. Finally there occur intuitive formations which are based on a number of stimulus manifolds each one of which in itself yields an intuitive whole of the first, second or third sort, but whose effects coincide [*zur Deckung kommen*] in such a way that... the absence of any one of them does not bring about any gap or discontinuity... The prime example of 4. is perception via double organs: two eyes or two ears are stimulated,

and I see *one* thing, hear *one* word. I close one eye, block up one ear, and see the same thing, hear the same word. No gap appears, nothing is lost; not even the brightness of what is seen or the intensity of what is heard are diminished. (p.53ff. of 1st ed., p.56f. of 3rd ed.)

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- 1928    "The Gestalt Hypothesis", *Psychological Review*, 35, 136- 41. Sympathetic presentation of Gestalt theory by the translator of Koffka.

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- Oppenheim, P. see Grelling and Oppenheim, Rescher and Oppenheim.
- Oppenheimer, E. 1935 "Optische Versuche über Ruhe und Bewegung", *Psychologische Forschung*, 20, 1-46. By student of Wertheimer.
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- Oyama, T. 1960 "Japanese Studies on the so-called Geometrical-Optical Illusions", *Psychologia*, 3, 7-20.

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- Park, J. see Epstein and Park.
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- Perkins, M. 1953 "Intersubjectivity and Gestalt Psychology", *Philosophy and Phenomenological Research*, 13, 437-51. Critique of positivist physicalism on the basis of an appeal to the peculiarities of intersubjectively confirmed experiences.
- Perussia, F. see Masini and Perussia.
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- 1928 "Über die Idee einer objektiven Psychologie. Psychoreflexologie und Behaviorismus im

Lichte wissenschaftstheoretischer Rechenschaftsgabe", *Zeitschrift für Psychologie*, 108, 371-97. On Pavlov and Bechterev.

- 1929 *Die Wertheimer-Koffka-Köhlersche Gestalttheorie und das Gestaltproblem, systematisch und kritisch dargestellt. Ein Kapitel aus der Prinzipienrevision in der gegenwärtigen Psychologie*, Leipzig: Barth, 1929. (Kiel Habilitation). English trans. as *The Gestalt Theory and the Problem of Configuration*, London: Kegan Paul, Trench, Trubner and Co., 1932. Somewhat exaggerated critique of Berlin school which is attacked, e.g. for producing a theory which leaves no room for the phenomena of attention and for embracing as a philosophical dogma the idea that the theory of isomorphism solves the mind-body problem. Just as the notion of 'element' was totally empty in the old atomistic theory, so, Petermann argues, the notion of 'Gestalt' is empty in the new theory: it does no work.
- 1931 *Das Gestaltproblem in der Psychologie im Lichte analytischer Besinnung, Ein Versuch zu grundsätzlicher Orientierung*, Leipzig: Barth. Defence of a production theory à la Schumann, G. E. Müller, based on the phenomena of attention; see esp. the discussion of Selz, pp.123-35. Somewhat one-sidedly critical of the Berlin school.
- Petitot, J. 1982 *Pour un schématisme de la structure. De quelques implications sémiotiques de la théorie des catastrophes*, (Thèse, Ecoles des Hautes Etudes en Sciences Sociales, Paris.
- 1986 "Structure", *Encyclopedic Dictionary of Semiotics*, Berlin: de Gruyter, vol. 2, 991-1022.
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- 1957 "Psicologia della forma", *Enciclopedia filosofica*, Venice and Rome: Istituto per la collaborazione culturale, 3, 1727-34.
- 1957a "Lo studio sperimentale della identità fenomenica", *Rivista di Psicologia*, 51, 1-21. See also Mosconi and Petter.
- Petzold, J. 1925 "Naturwissenschaftliche Denkpsychologie und Gestalttheorie", *Die Naturwissenschaften*, 13, 801-802. Identifies Gestalten with *concepts* in the spirit of Avenarius.
- 1926/27/ 28/29 "Komplex und Begriff", *Zeitschrift für Psychologie*, I: 99, 74-103, II: 102, 265-306, III: 108, 336-70, IV: 113, 287-344.
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- 1960 "Wahrnehmungskonstanz und Kausalitätswahrnehmung", *Psychologische Beiträge*, 5 (Metzger Festschrift), 183-231.
- 1967 *La psychologie de l'intelligence*, Paris: Armand Colin, pp. 61-74.

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- Piel, W. 1979 "Gestalttheorie als Wissenschaft und als Wissenschaftstheorie", in K. Guss, ed., *Gestalttheorie und Sozialarbeit*, Darmstadt: Steinkopff, 1-21.
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- 1928 "Grund und Figur bei schwacher Beleuchtung", *Zeitschrift für Psychologie*, 106, 316-26. On the ways in which figures merge into their backgrounds when darkened.
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- Plessner, H. 1923 *Die Einheit der Sinne. Grundlinien einer Aesthesiologie des Geistes*, Bonn: Cohen.
- 1928 *Die Stufen des Organischen und der Mensch. Einleitung in die philosophische Anthropologie*, Berlin/Leipzig: De Gruyter, 3rd ed., 1975. Esp. pp.89ff. on the Köhler-Driesch controversy.
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- 1966 *The Tacit Dimension*, New York: Doubleday. Generalizes Gestalt-theoretical ideas on the physiognomic character of perceptual knowledge to the spheres of theoretical and practical knowledge. All cognition involves a tacit or subliminal dimension in the sense that we always see more than can be formulated explicitly, e.g. in terms of rules.
- Pomerantz, J. R., Sager, L. C. and Stoeber, R. J. 1977 "Perception of Wholes and of their Component Parts: Some Configural Superiority Effects", *Journal of Experimental Psychology: Human Perception and Performance*, 3, 422-35. On pattern-recognition and part-discrimination. See also Kolers and Pomerantz.
- Pongratz, L. J. *et al.*, ed. 1972/78 *Psychologie in Selbstdarstellungen*, 2 vols., Bern/Stuttgart/Vienna: Hans Huber.
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- 1947 "Formes et effets polychromatiques", in *Miscellanea Psychologica Albert Michotte*, Louvain: Editions de l'Institut supérieur de Philosophie, 123-29.
- Poppelreuter, W. 1910 "Über die Bedeutung der scheinbaren Größe und Gestalt für die Gesichtsraumwahrnehmung", *Zeitschrift für Psychologie*, 54, 311-61. Dissertation, begun in Stumpf's laboratory in Berlin and completed under T. Ziehen. Claims that the facts of apparent form can be treated empirically without resorting to the notion of Gestalt quality. Stresses that the apparent form (shape, *Gestalt*) of spatial objects is adequate to the objective shape only in frontal-parallel orientation.
- 1911 "Beiträge zur Raumpsychologie", *Zeitschrift für Raumpsychologie*, 58, 208-62. Quantitative studies *inter alia* of form perception.
- Portele, G. 1979 "Gestalttheorie und Wissenschaftstheorie", *Gestalt Theory*, 1, 26-38.
- Portlock, D. B. 1976 *Phenomenology and Gestalt Psychology: An Epistemological Inquiry*. (Dissertation, Stanford).
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- 1962 "Tertiary Qualities", *Psychologische Beiträge*, 6 (Köhler Festschrift), 365-73.
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- 1984 "Ideomotorik und Isomorphie", in O. Neumann, ed., *Perspektiven der Kognitionspsychologie*. Berlin: Springer.



- 1985 "Ganzheits- und Gestaltpsychologie und Nationalsozialismus", in C.-F. Graumann, ed. 1985, 89-112 and in P. Lundgren, ed., *Wissenschaft im Dritten Reich*, Frankfurt: Suhrkamp.
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- Pupp, R. 1932 *Gestalt und Beziehung im Anschluß an die österreichische Schule*, (Dissertation, Munich, under Geysler). Valuable study of Austrian production theory, especially in relation to the work of Witasek and Meinong, affirming that what is characteristic of the production theory is its unrevoked holding on to the primacy of the elements. Following Gelb (1911) Pupp suggests an extension of Ehrenfels' theory admitting also relations as founding elements of Gestalt qualities and, more generally, laying particular stress on the notion of *Verschmelzung* and on the role of relations.
- It is not merely a sum of impressions that we have before us in the way of Gestalt with the sounding of the last note of a melody, but much rather, besides these and in their fusion,... a *sui generis* moment of peculiar penetration (p.90).
- After considering the Berlin school critique of the production theory (above all Koffka 1915), Pupp suggests a compromise position according to which the order from stimulus to sensation to act of production to Gestalt may sometimes be reversed: the experience of the Gestalt may come first, though sensations do nevertheless in certain circumstances manifest their primacy; or the two sorts of experiences may in some cases go in parallel.
- Purdy, D. M. 1935 "The Structure of the Visual World. I: Space Perception and the Perception of Wholes". *Psychological Review*, 42, 399- 424. Study of motor theory of visual perception, including discussion of Musatti 1931. The origin of perceptual localisation, coherence, etc., is explained in terms of oculomotor phenomena.
- 1935a "The Structure of the Visual World. II: The Action of Motor Impulses on Sensory Excitations", *idem*, 42, 528-36.

- 1936 "The Structure of the Visual World. III: The Tendency Toward Simplification of the Visual Field", *idem*, 43, 59-82. Isolates four sorts of phenomenal levelling or assimilation: 1. of colour-differences; 2. of discontinuities; 3. of differences in spatial position 4. of differences in geometrical form.
- Radaković, K. 1960 "Der Einfluß der Ehrenfels'schen Lehre von den Gestaltqualitäten auf die Soziologie", in Weinhandl, ed., 323-33.
- Radner, M. see Gibson and Radner.
- Rahn, C. 1913 *The Relation of Sensation to other Categories in Contemporary Psychology: A Study in the Psychology of Thinking, Psychological Monographs*, vol. 16, no. 1 (whole no. 67), Princeton: Psychological Review Company.
- Rapaport, D., ed. 1951 *Organization and Pathology of Thought. Selected Sources*, New York/London: Columbia University Press. Collection edited by student of Gelb.
- Rashevsky, N. 1934 "Physico-mathematical Aspects of the Gestalt Problem", *Philosophy of Science*, 1, 409-19.
- Rausch, E. 1937 "Über Summativität und Nichtsummativität", Dissertation, Frankfurt, *Psychologische Forschung*, 21, 209-89, repr. Darmstadt: Wissenschaftliche Buchgesellschaft, 1967. Seminal study of types of wholes in the light of Köhler's work on the concept of summativity. Cf. discussion in Smith and Mulligan 1982.
- 1948 "Figural-optische Untersuchungen", in *Bericht über den 17. Kongreß der Deutschen Gesellschaft für Psychologie in Göttingen*, Göttingen: Hogrefe, 37-39.
- 1949 "Variabilität und Konstanz als phänomenologische Kategorien", *Psychologische Forschung*, 23, 69-114. Thorough treatment of certain formal aspects of perceived constancy, and specifically of the differences between objects of perception as individuals and as members of classes, defends the asymmetry of the relation *is similar to*.

- Rausch, E. (cont.)
- 1950 "Zur Phänomenologie figural-optischer Dynamik", *Psychologische Forschung*, 23, 185-222. Experimental study in connection with Rausch 1949.
- 1951 "Zum Problem der Ähnlichkeit", *Psychologische Forschung*, 23, 495-512. Experimental study in connection with Rausch 1949.
- 1952 *Struktur und Metrik figural-optischer Wahrnehmung*, Frankfurt: Kramer. Unparalleled study of optical illusions and associated phenomena, with an exhaustive taxonomy of basic forms, especially in relation to those differences which consist in one figure's being *derived* from another in the sense of Rausch 1966. Culminates in a treatment of the Cartesian structure of phenomenal space.
- 1952a "Zum Ganzheitsproblem in der Psychologie des Denkens", *Studium Generale*, 5, 479-89.
- 1956 "Zur Theorie der sogenannten Vertikal-enttäuschung", *Rivista di Psicologia*, 50, 241-58. On the tendency to overestimate vertical as compared to horizontal magnitudes.
- 1960 "Denken und Raumschauung", in H. Thomae, ed., *Bericht über den 22. Kongreß der Deutschen Gesellschaft für Psychologie in Heidelberg 1959*, Göttingen, Hogrefe, 155-57.
- 1960a "Eine stroboskopische Versuchsapparatur", *Psychologische Beiträge*, 4, 110-17. On an apparatus constituted by a mosaic of flashing lights designed to produce stroboscopic effects.
- 1960b "Zur Entwicklung des Gestaltbegriffs", in Weinhandl, F. ed., 334-38.
- 1960c "Über kinästhetische Nachwirkungen", *Psychologische Beiträge*, 5 (Metzger Festschrift), 232-47. Figural after-effects depend not only on the conditions of stimulation but also on the associated behaviour and on the manner of experiencing the stimulus.

- 1962 "Über optisch wahrgenommene Singularitätsverlagerung", *Psychologische Beiträge*, 6 (Köhler Festschrift), 581-597.
- 1964 "Einzelgegenständlichkeit als phänomenale Eigenschaft", *Psychologische Forschung*, 28, 33-45. What are the effects of isolating the parts of a complex, and what is 'isolation'? Rausch discusses Ehrenfels' treatment of isolation in his 1890, distinguishing three different sorts of isolation-property: self-sufficiency, incompleteness, and lostness. Each of these can be illustrated in relation to simple musical examples. Philosophically interesting treatment of the problem of Gestalt qualities. See pp.56 ff. above.
- 1965 "Über den Begriff der Sinnesreizung und seine Nachbarn", in H. Heckhausen, ed., *Bericht über den 24. Kongreß der Deutschen Gesellschaft für Psychologie in Wien 1964*, Göttingen: Hogrefe, 58-61.
- 1966 "Probleme der Metrik (Geometrisch-optische Täuschungen)", in Metzger and Erke, eds., 776-865.
- 1966a "Das Eigenschaftsproblem in der Gestalttheorie der Wahrnehmung", in Metzger and Erke, eds., 866-953. See pp.50 ff., 62 ff. above.
- 1966b "Paradoxien der Identität", *Studium Generale*, 19, 383-391. Interesting treatment of the existential and functional dependence relations, particular those obtaining between agent and action, as a means of resolving the paradox 'Si duo faciunt idem, non est idem' (When two do the same, what they do is – in certain circumstances – not the same). Rausch develops a formal framework within which it is possible to distinguish between those moments of an action which are dependent on and those which are independent of the acting subject (with implications for the psychological, moral and legal treatment of action and responsibility).
- 1967 "Wolfgang Köhler", *Archiv für die gesamte Psychologie*, 119, 297-99.

- Rausch, E. (cont.)
- 1970 "Zur Phänomenologie der Prädikation", *Schweizerische Zeitschrift für Psychologie*, 29 (Meili Festschrift), 127-34. Phenomenological treatment of the difference between two readings of the subject-predicate form, 1. taking the subject as constant, the predicate as variable, 2. taking the predicate as constant, the subject as variable.
- 1971 "Betonungsproblem und Variabilitäts-Konstanz-Verhältnis", *Archiv für Psychologie*, 123, 235-43. On the distribution and coordination of emphases between parts of a sentence. It is normally the variable data in a sentence that are accentuated.
- 1971a "Geometrisch-optische Täuschungen", in *Lexikon der Psychologie*, I, Freiburg: Herder, 723-25.
- 1972 "Wahrnehmungstäuschungen", in *Lexikon der Psychologie*, III, Freiburg: Herder, 2523-26.
- 1972a "Optische Täuschung", in *Lexikon der Pädagogik*, Freiburg: Herder, 244-45.
- 1972b "Helldominanz und Dunkeldominanz bei stroboskopischen Phänomenen I", *Psychologische Beiträge*, 14, 165-214. On the conditions governing alternative dominance of bright and dark arrays in a system of flashing lights.
- 1975 "Autokinese stroboskopischer Bewegungsbahnen", in Flores d'Arcais, ed., 190-200.
- 1979 "Edwin Rausch" (Autobiography) in L. J. Pongratz, et al., eds., *Psychologie in Selbstdarstellungen*, vol.2, Bern/Stuttgart/Vienna: Hans Huber, 211-55.
- 1979a "Bemerkungen zu dem vorangehenden Beitrag [Stegagno, Stadler and Trombini 1979]", *Gestalt Theory*, 1, 52-53.
- 1981 "Wolfgang Metzger. Nachruf", *Gestalt Theory*, 2, 129-32.
- 1981a "Einübung in ein zweites Zahlensystem. Ein Beitrag zum Problem der Bezugssysteme", in

- I. Tent, ed., *Erkennen, Wollen, Handeln*, Göttingen: Hogrefe, 136-54. Demonstrates how alternatives to the decimal system, e.g. taking 6 as base, can be acquired in a short time in such a way that the new system does not interfere with the old. Rausch investigates whether the transfer involved could serve as a model for the relations between other pairs of reference systems.
- 1982 *Bild und Wahrnehmung. Psychologische Studien ausgehend von Graphiken Volker Bußmanns*, Frankfurt: Kramer.
- 1983 "Helldominanz und Dunkeldominanz bei stroboskopischen Phänomenen II", *Psychologische Beiträge*, 25, 397-426. It is shown how a process objectively consisting of successive extinction and flashing of adjacent elements in a mosaic of lights can appear as the movement of a dark object in a bright continuum. Several modes of phenomenal causality can be distinguished thereby (the dark object can e.g. be seen to cover up an adjacent bright one or to displace or engulf it).
- 1985 "Über Eigenschaften und Prädikate", *Gestalt Theory*, 7, 139-54.
- Rausch, I., Hoeth, F., 1965  
Reisse, W. and  
Meyer, I. "Kommunikationsstruktur und Gruppenleistung. Affektive Spannungen und Leistungsminderung als Folge von Fehlerwartungen der Gruppenmitglieder", *Psychologische Forschung*, 28, 598-615. See also Becker and Rausch.
- Rawlins, I. 1953 *Aesthetics and the Gestalt. A Collection of Essays and other Writings*, Edinburgh and London: Nelson. Short pieces, mainly on painting.
- Reenpää, Y. 1936 *Allgemeine Sinnesphysiologie. Stellung und Bedeutung des sinnesphysiologischen Versuches im Bereich der Observation, des exakten Experimentes und der Begriffsbildung*, Vienna: Springer. An interesting treatment of the structures of sensation and of the objects founded thereon, in the spirit of Carnap's

*Aufbau*. Reenpää's position is a version of Gestalt constructivism: the parts of Gestalten exist, and they can be investigated, but they do not exist in isolation (as they do, for example, from the standpoint of cruder forms of sensationalism).

- 1953 "Über die Struktur der Sinnesmannigfaltigkeit und der Reizbegriffe", *Sitzungsberichte der Heidelberger Akademie der Wissenschaften*, math.-naturw. Kl., Jahrgang 1953, 1. Abh., 1-28. Formal/mathematical treatment of dimensions of sensation (intensity, quality, location) and of the concepts of threshold and Gestalt.
- Reich, O. 1933 *Das Qualitätsproblem der Psychologie und seine Lösung. Eine musikpsychologisch-psychologische Abhandlung*, (Dissertation, Prague, im Selbstverlag).
- Reimann, H. and Birkhan, G. 1983 "Ein ganzheitliches Modell der Informationsspeicherung", *Archiv für Psychologie*, 135, 175-98.
- Reiser, O. 1927 "A Phenomenological Interpretation of Physico-Chemical Configurations and Conscious Structures", *Journal of Philosophy*, 24, 373-85 and 404-15.
- 1930 "Gestalt Psychology and the Philosophy of Nature", *Philosophical Review*, 39, 556-72.
- 1931 "The Logic of Gestalt Psychology", *Psychological Review*, 38, 359-68. Argues that the Gestalt-theoretical treatment of the thought-processes, if it is to be adequate, must be able to do justice to the thought-processes of the mathematician.
- 1934 "Time, Space and Gestalt", *Philosophy of Science*, 1, 197-223.
- 1939 "Aristotelian, Galilean and Non-Aristotelian Modes of Thinking", *Psychological Review*, 46, 151-62. Argues that Gestalt theorists (and particularly Lewin) have not gone far enough in their examination of the role of logic in the

- construction of systems. Reiser countenances a further step, beyond Galileo and in the direction of Dirac.
- Reiter, L. see Brunswik.
- Remondino, C. 1975 "Achromatic Color Conditions in the Perception of Transparency: The Development of an Analytical Model", in Flores d'Arcais, ed., 110-38. Development of Metelli's ideas, as put forward in his 1967 and 1975.
- Renvall, P. 1929 "Zur Theorie der stereokinetischen Phänomene", in *Annales Universitatis Aboensis*, Series B, 10 (ed. E. Kaila). Includes a discussion of Musatti's early work on stereokinetic phenomena. Musatti is criticized for having appealed to assimilative processes to account for stereokinetic phenomena. Following Kaila, Renvall argues that the simple structural laws of Gestalt psychology can explain the phenomena without any need to appeal to our past experiences with solid objects.
- Rescher, N. and Oppenheim, P. 1955 "Logical Analysis of Gestalt Concepts", *British Journal for the Philosophy of Science*, 6, 89-106. Informal discussion of emergence, holism and dependence, inspired by Grelling. Concludes with an interesting topological treatment of the structural features of wholes, i.e. of those features which are invariant under certain sorts of transformations (transpositions):
- A *complex* is characterised by the following three features:
- (1) A set  $G$  of topologically structured attributes.
  - (2) A topologically structured space  $X$ , constituting the domain of positions.
  - (3) An assignment  $f$  of exactly one  $G$ -attribute to each  $X$ -position. (p. 100)
- Two complexes  $(X_1, G_1, f_1)$  and  $(X_2, G_2, f_2)$  are *isomorphic* if
- (i)  $X_1$  and  $X_2$  have the same topological structure,
  - (ii) there exists a one-to-one correspondence  $F$  of  $G_1$  and  $G_2$  which preserves their type, and all of their topological properties, and
  - (iii) the assignments  $f_i$  assign  $F$ -corresponding  $G_i$ -attributes to corresponding  $X_i$  positions. (p. 101f.)



This definition of the isomorphism of complexes can in certain cases be extended to a quantitative measurement of similarity of structure. It generates also the possibility of classifying different types of complexes with respect to different structural characteristics.

- Resnik, M. 1981 "Mathematics as a Science of Patterns. Ontology and Reference", *Noûs*, 15, 529-50.
- Restorff, H. von 1933 "Analyse von Vorgängen im Spurenfeld. I. Über die Wirkung von Bereichsbildungen im Spurenfeld", *Psychologische Forschung*, 18, 299-342. See also Köhler and Restorff.
- Révész, G. 1912 "Az érzetsorok phaenomenologiai vizsgalata" [The phenomenological study of series of sensations] (in Hungarian), *Athenaum*, 152-64. Analyses the problem of similarity and of 'interchromatic relations of sound and colour', new phenomena which 'have to be regarded as objects of higher order'.
- 1913 *Zur Grundlegung der Tonpsychologie*, Leipzig-Weit. Dedicated to G. E. Müller.
- 1926 "Abstraktion und Wiedererkennung. Vergleichend-psychologische Versuche an Menschen und an niederen Affen", *Zeitschrift für Psychologie*, 98, 34-56.
- 1927 "Taktile Gegenstandswahrnehmung und Gestaltbildung", in *Proceedings and Papers of the 8th International Congress of Psychology in Groningen, 1926*, Groningen: Noordhoff, 384-92.
- 1937 "Gibt es einen Hörraum?", *Acta Psychologica*, 3, 137-92.
- 1938 *Die Formenwelt des Tastsinnes, 1. Grundlagen der Haptik und der Blindenpsychologie, II Formästhetik und Plastik der Blinden*, s'Gravenhage: Nijhoff; Eng. trans. *Psychology and Art of the Blind*, London: Longman, Green 1950.

- 1949 "Colour Mixture and Sound Mixture". *Acta Psychologica*, 6, 3-26.
- 1953 "Zur Revision der Gestaltpsychologie", *Schweizerische Zeitschrift für Psychologie*, 12, 89-109. On the inapplicability of Gestalt theory to haptic phenomena, the presentation of which normally requires active effort. Cf. reply by Metzger 1954a.
- 1953a "Gestaltbildung und Strukturkenntnis", *Wiener Zeitschrift für Philosophie, Psychologie und Pädagogik*, 4, 268-73. On the need to acknowledge the significance of the functioning of language in the formation of Gestalten, especially in the haptic sphere, where concepts play a crucial role.
- A Révész bibliography to 1950 is provided in *Acta Psychologica*, 1950, 408-14.
- Richards, C. S. 1975 "'Closure' and Gestalt Notions on the Visual Memory of Form: A Review", *Journal of General Psychology*, 93, 95-113. Critical survey of literature on gapped circle patterns, concluding that there is little positive evidence for a strong closure effect in relation to such patterns, and a great deal of equivocal or negative evidence. The paper closes with a treatment of alternatives to the Gestalt closure hypothesis.
- Richer, P. 1979 "The Concepts of Subjectivity and Objectivity in Gestalt Psychology", *Journal of Phenomenological Psychology*, 10, 33-55. Historical review of the theory of constancy.
- Rignano, E. 1927 "La teoria della forma della nuova Scuola psicologica tedesca contrapposta all'associazionismo della scuola psicologica Inglese". *Scintilla* (Bologna), 42, Parte I: La "Gestalt" in quanto ordine di elementi sensoriali, no. 185, 145-58; Part II: La "Gestalt" in quanto unificazione di elementi sensoriali e in quanto significato d'un oggetto, no. 186, 215-28; Parte III: La "Gestalt" in quanto concetto. Conclusione, no. 187, 281-90; part I also in *Rivista di Psicologia*, 23, 185-198.

- 1928 "Zur Gestalttheorie. Antwort auf Herrn Köhlers kritische Erwiderung", *Scientia*, 43, 323-56. Reply to Köhler 1928a. Gestalt structure is explained by Rignano in terms of an additional component bond, joining together individual psychic data, this bond being identified with the 'significance' of the data for the perceiving subject.
- 1928a "The Psychological Theory of Form", *Psychological Review*, 35, 118-35.
- 1928b "Die Gestalttheorie", *Psychologische Forschung*, 11, 172-87 (abbreviated translation of Rignano 1928). Critique of Wertheimer-Köhler-Koffka Gestalt psychology for the deficient empirical basis of its claims and for ignoring the specific invariability of the elementary sensations. How, if part-properties are dependent on the whole, is recognition of the same object possible, since no two environments are exactly alike? Contains a further treatment of Rignano's utilitarian view of configuration-phenomena as resulting from the unification of sensory elements with 'meanings' or 'concepts' (that is with affective classifications of objects).
- Riley, D. A. 1963 "Memory for Form", in L. Postman, ed., *Psychology in the Making. Histories of Selected Research Problems*, New York: Knopf, 402-65.
- Ritter, W. E. and Bailey, E. W. 1928 "The Organismic Conception: Its Place in Science and its Bearing on Psychology", *University of California Publications in Zoology*, 31, 307-58.
- Ritzel, H. 1913 *Die Relation der Ähnlichkeit* (Dissertation, Munich), esp. § 12, "Ähnlichkeit und Gestaltqualität". By student of Lipps.
- Rock, I. 1960 "The Present Status of Gestalt Psychology", in J. Peatman and E. Hartley, eds., *Festschrift for Gardner Murphy*, New York: Harper, 117-44.
- 1966 *The Nature of Perceptual Adaptation*, New York: Basic Books.

- 1972 "Foreword" to Goldmeier 1972, 3-13.
- 1973 *Orientation and Form*. London: Academic Press. On retinal orientation and disorientation with implications for a theory of form-perception.
- 1977 "In Defence of Unconscious Inference", in Epstein, ed., 321-73. Propounds a cognitive theory of perception as against a higher-order stimulus theory.
- 1983 *The Logic of Perception*. Cambridge, Mass.: M.I.T. Press. Embodies a revision of the author's earlier Gestaltist position in the direction of a problem-solving approach.
- Rock, I. and Anson, R. 1979 "Illusory Contours as the Solution to a Problem", *Perception*, 8, 665-81.
- Rock, I. and Gilchrist, A. 1975 "Induced Form", *American Journal of Psychology*, 88, 475-82.
- Rock, I., Halper, F. and Clayton, T. 1972 "The Perception and Recognition of Complex Figures", *Cognitive Psychology*, 3, 655-73.
- Roelofs, C. O. see Waals and Roelofs.
- Romano, D. F. 1978 "Noam Chomsky e la Gestalt: su una possibile linea di continuità", in Kanizsa and Legrenzi, eds., 151-63. Compares Chomsky's distinction between competence and performance with Koffka's two environmental levels (geographical and behavioural).
- Roşca, A. 1929 "Configurații le fiziologice și fizice", in L. Rusu, *et al.*, 72-81.
- 1929a "O privire sintetică asupra psihologiei configurației", in L. Rusu, *et al.*, 100-136.
- Rosenfield, A. see Anderson, *et al.*
- Rossi, V. 1927 "La nuove correnti nella psicologia delle sensazioni visive. Le "Gestalttheorie"", *Archivio di Oftalmologia*, 34.

- Roters, W. 1930 "Gedanken zum Problem der Ganzheit in der Psychologie", *Archiv für die gesamte Psychologie*, 77, 353-64. Mainly on Driesch.
- Roth, M.-L. 1972 *Robert Musil: Ethik und Ästhetik. Zum theoretischen Werk*, Munich: List.
- Rotschild, H. 1923 "Über den Einfluß der Gestalt auf das negative Nachbild ruhender visueller Figuren", *Archiv für Ophthalmologie*, 112, 1-28. See review by Wertheimer (1924).
- Rubin, E. 1914 "Die visuelle Wahrnehmung von Figuren", in F. Schumann, ed., *Bericht über den 6. Kongreß für experimentelle Psychologie in Göttingen, 1914*, Leipzig: Barth, 60-62.
- 1915 *Synsoplevede Figuren. Studier i psykologisk Analyse*, German translation: *Visuell wahrgenommene Figuren. Studien in psychologischer Analyse*, Copenhagen: Gyldenalske, 1921, extracted in Beardslee and Wertheimer, eds., 194-203. First detailed study of figure-ground phenomenon. The 'ground' has 'stuff-character', the 'figure' has 'thing-character'. The ground is localized behind the figure; it is less structured, less penetrating, less clear, less significant and less memorable, and it brings forth fewer associations. Rubin points to the importance of the contour or boundary for the understanding of the figure-ground opposition, and in particular to the existence of peculiar and often sudden transformations of contours in our perception of ambiguous figures. The contour is not a separate entity but determined by the nature of the figured surface to which it belongs, and Rubin demonstrates how in such transformations surfaces emerge as a whole and not piecemeal. Concludes with an analysis of the relations between contour, surface-figure and strip-figure [*Strichfigur*], and with an argument for the visibility of certain sorts of figures without extension. An historical appendix deals with the theories of *minimum visibile* of the British empiricists, Rubin providing evidence to suggest that Hume had carried out experiments similar to his own and that he had reached the same results.

- 1920 "Vorteile der Zweckbetrachtung für die Erkenntnis", *Zeitschrift für Psychologie*, 85 (G. E. Müller Festschrift), 210-23, repr. in Rubin 1949, 66-81.
- 1922 "Psychologische Geometrie", in K. Bühler, ed., *Bericht über den 7. Kongreß für experimentelle Psychologie in Marburg, 1921*, Jena: Fischer, 167-86. Expanded as Rubin 1922a.
- 1922a "Zur Psychophysik der Geradheit", in *Zeitschrift für Psychologie*, 90, 67-105.
- 1926 "Die Nichtexistenz der Aufmerksamkeit", in K. Bühler, ed., *Bericht über den 7. Kongreß für experimentelle Psychologie in München, 1925*, Jena: Fischer, 211-12. 'Attention' is an ambiguous term: to suppose otherwise is to be led into confusion; talk of types of attention has no explanatory value.
- 1927 "Über Gestaltwahrnehmung", *Proceedings and Papers of the 8th International Congress of Psychology at Groningen, 1926*, Groningen: Noordhoff, 175-83, repr. as "Einige prinzipielle Gesichtspunkte" in Rubin 1949, 9-17. Presentation of principles of 'adspektive Psychologie' and criticism of elementarism. Elements, Rubin argues, are artificial abstractions; psychic structures are not generated from elements in any way, since elements could never exist in pure form. Adspective psychology concentrates rather on the actually given formations, and attempts not to decompose these into mere pieces, but to investigate their various 'sides' or 'aspects'. The problem whether a psychic whole is more than the sum of its parts does not arise, since it is never affirmed that all the sides and parts are known.
- 1927a "Visuell wahrgenommene wirkliche Bewegung. Vorläufige Mitteilung", *Zeitschrift für Psychologie*, 103, 384-92, repr. in Rubin 1949, 250-59.
- 1935 "Haptische Untersuchungen", *Acta Psychologica*, 1, 285-380, as repr. in Rubin 1949, 129-249.

Shape is perceived by means of a sort of "thinking" in the central nervous system, the formulation of judgments e.g. of the curvature of the edge of a ruler being to some extent dependent on the relative position of the observer and on movements and pressure of fingers, arms, etc. 'As a rule there is very little in the consciousness of the subject regarding the position and movements of arm, hand and fingers.' (p.244) On the way in which the regulation of the finger movements is influenced by the general knowledge of the subject. 'Instead of moving the fingers along the edge, you can move the edge along the fingers ("passive" touch experiences).' (p.245) 'If through touch experience alone a combination of edge-form and ruler-movement is selected which does not correspond to the objectively given combination then the sudden cooperation of vision will transform the selection to something more like the objectively (and visually) given.' (p.246)

- 1936 "Taste", *British Journal of Psychology*, 27, 74-85, repr. in Rubin 1949, 35-50.
- 1936a "Bemerkungen über unser Wissen von anderen Menschen", *Erkenntnis*, 6, 392-97, repr. in Rubin 1949, 29-34.
- 1949 *Experimenta Psychologica. Collected Scientific Papers in German, English and French*, Copenhagen: Munksgaard.
- 1950 "Visual Figures apparently incompatible with Geometry", *Acta Psychologica*, 7 (Révész Festschrift), 365-87.
- 1956 *Til Minde om Edgar Rubin*, Nordisk Psykologi's Monografiserie 8. Posthumous publication of papers by Rubin: "Almindelige Betragtninger over psykologisk Metode" (from the '20s), 7-21; "Bemaerkninger angaaende psykologisk Metode" (from the '30s), 22-27; "Om Forstaaelighedsreserven og om Overbestemthed", 28-37.

- Rudin, S. A. and Stagner, R. 1958 "Figure Ground Phenomena in the Perception of Physical and Social Stimuli", *Journal of Psychology*, 45, 213-25.
- Runeson, S. 1977 "On Visual Perception of Dynamic Events" (Dissertation, Uppsala).
- Rupp, H. 1923 "Über optische Analyse", *Psychologische Forschung*, 4 (Stumpf Festschrift), 262-300. By assistant of Stumpf.
- Russell, B.A.W. 1899 Review of Meinong 1896, *Mind*, 8, 251-56.
- 1904 "Meinong's Theory of Complexes and Assumptions", *Mind*, 13, 204-19, 336-54, 509-24, repr. in Russell, *Essays in Analysis*, London: Allen and Unwin, 1973.
- Rusu, L. 1929 "Inceputurile psihologiei configurației", in L. Rusu, *et al.*, 1-12.
- Rusu, L. *et al.* 1929 *Psihologia configurației (Studii cercetări psihologice*, 3), Cluj: Cartea Românească.
- Sagara, M. and Oyama, T. 1957 "Experimental Studies on Figural After- Effects in Japan", *Psychological Bulletin*, 54, 327-38.
- Sager, L. C. see Pomerantz, Sager and Stoeber.
- Sakuma, K., ed. 1932/47 *Gestalt no mondai to gakusetsu* [The Gestalt Problem and its Theory] (in Japanese), 7 vols., Tokyo: Uchida-rokakuho. Sakuma studied with Wertheimer in Berlin from 1923-25. He was responsible, with Onojima, for introducing Gestalt theory into Japan.
- Salber, W. 1981 "Ist Gestalt noch zu gebrauchen? (Entwicklungen der Gestaltpsychologie)", *Zeitschrift für klinische Psychologie und Psychotherapie*, 29, 292-306.
- Sallis, J. ed. 1981 *Merleau-Ponty: Perception, Structure, Language. A Collection of Essays*, Atlantic Highlands, N.J.: Humanities Press, repr. from *Research in Phenomenology*, 10, 1980.
- Sambin, M. 1974 "Angular Margins without Gradients", *Italian Journal of Psychology*, 1, 355-61.



- 1975 "The Rule of Terminal Tension in the Organization of Margins without Gradients", *Italian Journal of Psychology*, 2, 239-57.
- 1977 "Contours without Gradients with Different Phenomenal Evidence", *Italian Journal of Psychology*, 4, 147-73.
- 1978 "Il contrasto di chiarezza nelle figure anomale", *Giornale Italiano di Psicologia*, 5, 543-64. On the dependence of brightness contrast on figural features.
- 1980 "La psicologia della Gestalt" in P. Legrenzi, ed., *Storia della psicologia*, Bologna: Il mulino, 111-46.
- 1980a "Figure anomale. Il contrasto di chiarezza come risultato delle disomogeneità indotte", *Giornale Italiano di Psicologia*, 7, 121-45. Brightness contrast in anomalous figures is explained in terms of induced homogeneity, which is shown to be sensitive to the classical grouping principles of Gestalt psychology.
- 1981 "Figure anomale. La polarizzazione intrafigurale delle parti inducenti", *Giornale Italiano di Psicologia*, 8, 421-36. See also Bagnara and Sabin.
- Sampaio, A.C. 1943 *La translation des objets comme facteur de leur permanence phénoménale* (Dissertation under Michotte), Louvain: Warny, repr. in Michotte et al. 1962, 277-98.
- Sander, F. 1913 "Elementarästhetische Wirkungen zusammengesetzter geometrischer Figuren", *Psychologische Studien*, 9, 1-37.
- 1926 "Optische Täuschungen und Psychologie", *Neue Psychologische Studien*, 1, 159-66.
- 1927 "Über Gestaltqualitäten", *Proceedings and Papers of the 8th International Congress of Psychology at Groningen, 1926*, Groningen: Noordhoff, 183-89.
- 1928 "Experimentelle Ergebnisse der Gestaltpsychologie" in E. Becher, ed., *Bericht über*

- den 10. Kongreß für experimentelle Psychologie. Bonn 1927, Jena: Fischer, 23-88 and as Separatum. General survey comprehending results of both the Berlin and Leipzig schools.
- 1930 "Structure, Totality of Experience, and Gestalt" in C. Murchison, ed., *Psychologies of 1930*, Worcester, Mass.: Clark University Press, 188-204 and in German as "Funktionale Struktur, Erlebnisganzheit und Gestalt" in *Archiv für die gesamte Psychologie*, 85, 1932, 237-60.
- 1932 "Gestalttheorie und Kunsttheorie. Ein Beitrag zur Psychologie architektonischer Gestalten", *Neue Psychologische Studien*, 4, 319-46.
- Sander, F. and Volkelt, H. 1962 *Ganzheitspsychologie. Grundlagen, Ergebnisse, Anwendungen (Gesammelte Abhandlungen)*, Munich: Beck, 2nd ed. 1967.
- Sarlo, F. de 1905 "Oltre la qualità dei dati della sensibilità sono ammissibili delle *qualità formali*? Nel caso affermativo, in che senso e quante specie de *qualità formali* sono ammissibili?", in S. de Sanctis, ed., *Atti del V Congresso Internazionale de Psicologia, Rome, 1905*, Rome: Forzani, 386-93. Includes discussion, with contributions by Benussi and von Sterneck.
- Sato, K. 1963 "Gestalt Psychology in Japan", *Psychologia*, 6, 7-11.
- Saxinger, R. 1902 "Dispositionspsychologisches über Gefühlskomplexionen", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 30, 391-421. Meinong-influenced study of complex and co-existent feelings. Puts forward a conception of the human personality as a *Gestaltqualität* in Ehrenfels' sense (p.409).
- Sayanagi, T. 1942/43 "[On the Influence of the Contour Figure on the Surrounding Ground]" (in Japanese), *Japanese Journal of Psychology*, 17, 406-23, 18, 33-44.
- Schapp, W. 1910 *Beiträge zur Phänomenologie der Wahrnehmung*, Göttingen: Kaestner; 2nd ed., Erlangen:

Philosophische Akademie, 1925 (repr. Frankfurt: Suhrkamp, 1976). Part I is an insightful phenomenological study of the relations between perception of motion, shape and pressure and perception of qualities such as elasticity, roughness, heaviness, stickiness, etc., and also of the relations between the visual world and the world of acoustic experience. Part II is a study of the varieties of the perception of colours, both as representing things and as 'mere appearances'. Schapp puts forward a criterion of thing-colour perception in terms of clarity and specific order of the colours perceived. Part III (not incl. in the 2nd ed.) is on the interplay between cognition ('Idee') and perception, with special regard to the role of perceptual boundaries.

- Scheerer, E.            1980    "Gestalt Psychology in the Soviet Union. I. The Period of Enthusiasm", *Psychological Research*, 41 (Luria Memorial Issue), 113-32.
- 1985    "Organische Weltanschauung und Ganzheitspsychologie", in C.-F. Graumann, ed., 15-54.
- Scheerer, M.            1931    "*Die Lehre von der Gestalt*". *Ihre Methode und ihr psychologischer Gegenstand*, Berlin and Leipzig: De Gruyter. Critical survey, by pupil of W. Stern, stressing the inadequacy of Gestalt theory to the inner ('personal') aspects of mental processes.
- 1954    "Cognitive Theory", in G. Lindzey, ed., *Handbook of Social Psychology*, Cambridge, Mass.: Addison-Wesley, 1, 91-142.
- Scheler, M.             1926    "Erkenntnis und Arbeit" in *Die Wissensformen und die Gesellschaft*, Leipzig: Der Neue Geist Verlag, repr. in Scheler, *Gesammelte Werke*, vol. 8, Bern: Francke, 2nd ed., 1960, 191-382, esp. Ch. 5, "Zur Philosophie der Wahrnehmung".
- Schering, W.            1927    *Ganzes und Teil bei der sozialen Gemeinschaft. Ein Beitrag zur Anwendung der Gestalttheorie auf das soziale Leben*, Dissertation, Berlin (under Köhler, Wertheimer, Vierkanndt). Critique of individualism. Both the social whole

and the individual exhibit Gestalt character; but because the former predominates, the behaviour of the individual is affected in such a way as to bring about social unity, which rests not on 'reason and fear, but on social drives'.

- Schiller, P. von      1938      "A Configurational Theory of Puzzles and Jokes", *Journal of General Psychology*, 18, 217-33.
- 1948      *Aufgabe der Psychologie. Eine Geschichte ihrer Probleme*, Vienna: Springer. Especially ch.8: "Der ganzheitliche Zug: Die Gestaltlehre", on Köhler on physical Gestalten and Lewin on the dynamics of action.
- Schmitz, H.            1964ff.      *System der Philosophie*, Bonn: Bouvier. Esp. vols. II/2 (on Gestalt and aesthetics), III/1 (on spatial Gestalten), and III/5 (on perception of things and qualities).
- Schoenfeld, N.        1941      "The Metaphor of 'Closure'", *Psychological Review*, 48, 487-97. The term 'closure' names an observable perceptual phenomenon, but its meaning is in need of precise definition. Schoenfeld gives reasons why the notion should not be illegitimately extended into other spheres.
- Schole, H.             1930      *Tonpsychologie und Musikästhetik. Art und Grenzen der wissenschaftlichen Begriffsbildung*, Göttingen: Vandenhoeck und Ruprecht. Includes a detailed treatment of Stumpf and Köhler on the structures of tones.
- Scholtz, D. A.         1958      "Die Grundsätze der Gestaltwahrnehmung in der Haptik", *Acta Psychologica*, 13, 299-33. Argues that Wertheimer's Gestalt laws have no validity for haptic perception.
- Schützenhöfer, A.    1967      *Informationstheoretische Interpretation der figuralen Güte. Eine Untersuchung an Rasterfiguren*, (Dissertation, Graz).
- Schulte, D.            1974      *Feldabhängigkeit in der Wahrnehmung*, Meisenheim: Hain. See also Erke and Schulte.
- Schulte, H.            1924      "Versuch einer Theorie der paranoischen Eigenbeziehung und Wahnbildung", *Psycho-*

- logische Forschung*, 5, 1-23, extracted in Ellis, ed. as "An Approach to a Gestalt Theory of Paranoic Phenomena", 362-69. Wertheimer-inspired application of Gestalt theory in the field of social psychology. Discusses Gestalt laws governing tendencies to group-formation and its disturbance in given contexts.
- Schulte, J. 1983 "Wittgenstein e la Gestaltpsychologie", in A. Gargani, ed., *Ludwig Wittgenstein e la cultura contemporanea*, Ravenna: Longo Editore, 39-48. Emphasizes the importance of Gestalt psychology, and especially of the work of Köhler, in Wittgenstein's later thought. Wittgenstein's central criticism of Gestalt psychology is that it too readily assumes that we see two distinct objects in cases of an aspect switch.
- 1987 *Erlebnis und Ausdruck. Wittgensteins Philosophie der Psychologie*, Munich: Philosophia. Includes a treatment of Wittgenstein and Gestalt psychology.
- Schulte, R. W. 1925 "Die gegenseitige Beeinflussung von Druckempfindungen", *Psychologische Studien*, 10, 339-80.
- Schultze, F. E. O. 1906 "Einige Hauptgesichtspunkte der Beschreibung in der Elementarpsychologie. I. Erscheinungen und Gedanken. II. Wirkungsakzente sind anschauliche, unselbständige Bewußtseinsinhalte", *Archiv für die gesamte Psychologie*, 8, 241-338 339-84. The term 'Wirkungsakzent' (accent of effect) is derived from A. Hildebrand, *Das Problem der Form in der bildenden Kunst* (Strasburg: Heitz, 1893). Accents of effect are associated with specific elements in perceptual complexes. They are characterized as being intuitive and incomplete [*unselbständig*]. Certain accents of affect associated with specific elements in perceptual complexes – e.g. the expressive character of a line representing the mouth in a drawing of a face – can be generated by acts of will even when these elements are isolated from their surrounding complexes. On Gestalt-qualities see esp. pp. 357ff.

- 1908 "Idem, III. Über Organempfindungen und Körpergefühle (Dynamien)", *Archiv für die gesamte Psychologie*, 11, 147-207.
- 1908a "Beiträge zur Psychologie des Zeitbewußtseins", *Archiv für die gesamte Psychologie*, 13, 275-351. Distinguishes five types of relation between heard beats: 1. beats are in total fusion, 2. beats constitute a trill, 3. beats form a collection, 4. beats are brought together subjectively to form a unity, 5. beats are heard as objectively separate from and independent of each other.
- Schulze, K. 1922 *Gestaltwahrnehmung von 3 und mehr Punkten auf dem Gebiet des Raumsinnes*, Langensalza: Beyer.
- Schulzki, E. 1980 *Der Mensch als Elementenkomplex und als denk-ökonomische Einheit. Zur Anthropologie Ernst Machs*, Dissertation, Münster.
- Schumann, F. 1898 "Zur Psychologie der Zeitanschauung", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 17, 106-48. Expounds a theory of attention based on the work of G. E. Müller. Criticizes Ehrenfels' claim that the existence of Gestalt qualities has been rigorously demonstrated.
- 1898a "Zur Schätzung leerer, von einfachen Schalleindrücken begrenzter Zeiten", *Zeitschrift für Psychologie*, 18, 1-48.
- 1900 "Beiträge zur Analyse der Gesichtswahrnehmungen, I. Einige Beobachtungen über die Zusammenfassung von Gesichtseindrücken zu Einheiten", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 23, 1-32. First treatment of appearance of subjective or phenomenal contours in the absence of abrupt stimulus gradients. 'If by Gestalt qualities we understand only characters [*Merkmale*] which mark out the complex of elements, then I, too, regard their existence as established, for one can already regard the greater unity of a complex as a 'feature' in this sense. Ehrenfels, however, spoke not of new 'features' but of 'positive

contents of presentations'. (p.31) Schumann himself sees configuration phenomena as being explained in terms of the association of general names with groups of psychic data. He defends a production theory of Gestalt perception on the basis of a theory of attention.

- 1900a "Beiträge zur Analyse der Gesichtswahrnehmungen, II. Zur Schätzung räumlicher Größen", *idem*, 24, 1- 33.
- 1902 "Beiträge zur Analyse der Gesichtswahrnehmungen, III. Der Successivvergleich", *idem*, 30, 241-91, 321- 39.
- 1904 "Beiträge zur Analyse der Gesichtswahrnehmungen, IV. Die Schätzung der Richtung", *idem*, 36, 161-85. Parts I-IV also published together as *Separatum*, Leipzig: Barth, 1904.
- 1907 "Psychologie des Lesens", in F. Schumann, ed., *Bericht über den 2. Kongreß für experimentelle Psychologie in Würzburg, 1906*, Leipzig: Barth, 153-83.
- 1908 *Untersuchungen zur Psychologie des Lesens*, Leipzig: Barth.
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of immediate short-circuiting of nervous impulses (as held by Wertheimer, *et al.*)? Or is it *binary*, i.e. such as to demand an extra level of 'intellectual processing' (as on the Graz production theory)? Spearman argues that the opposition between the two groups is spurious: any relational whole can be perceived either directly (the elements are perceived *as* standing in given relations), or intellectually (the subject perceives *that* the elements stand in given relations). The ontological correlate of the former experience is then simply the result of combining together the ontological correlate of the latter with its underlying foundation. Anticipates some of the ideas in Rausch 1966a.

1927 "Two Defects in the Theory of 'Gestalt'", *Proceedings and Papers of the 8th International Congress of Psychology at Groningen, 1926*, Groningen: Noordhoff, 190-97. 1. Confusion between 'shapes' and 'wholes'. 2. The doctrine of ultimate parts.

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Deeper than all these defects, however, and mainly responsible for them, has been one great paralysing confusion; that between the objective matter regarded and the subjective manner of regarding it. Under such names as "Gestalten" [etc.] all genuine processes of knowing have been replaced by mere trivialities of grouping. (p.382)

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- Springbett, B. M. see Humphrey and Springbett.
- Squires, P. C. 1926 "Visual Illusions with Special Reference to Seen Movement", *Psychological Bulletin*, 23, 374-98.
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- 1972 "Figural Aftereffects as Optical Illusions", *American Journal of Psychology*, 85, 351-75.
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- 1972 "Untersuchungen zum Problem virtueller Konturen in der visuellen Wahrnehmung", *Zeitschrift für experimentelle und angewandte Psychologie*, 19, 325-50.
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time and immediately afterwards, or after a short interval, a second figure in the same spatial position. The duration of the interval after which the impression of one figure undergoing transformation changes into the impression of two successive figures, defines the resistance of the figure to transformation, what is called the 'tolerance of identity'. The latter is, unlike identity, a continuous feature of a figure; a certain figure may possess more or less of this quality. Measures of tolerance of identity can be used as a means of gauging structural features of figures, qualities of parts and fragments of figures, figural goodness, Prägnanz, etc.

- 1979 "Quantitative Analyse der Rauschschen Prägnanzaspekte", *Gestalt Theory*, 1, 39-51. Application of SMT to yield quantitative measures of the first four of the Prägnanz-aspects distinguished by Rausch in his 1966a. See comment by Rausch 1979a.
- Stadler, M. and Trombini, G. 1971 "Die Transformationsscheinbewegung als funktionales Kriterium phänomenaler Sachverhalte", *Psychologische Beiträge*, 13, 239-56. See also Hepke and Stadler; Seeger and Stadler; Trombini and Stadler; Trombini, Stadler and Stegnano, etc.
- Stagner, R. see Rudin and Stagner.
- Steck, M. 1941 "Wissenschaftliche Grundlagenforschung und die Gestaltkrise der exakten Wissenschaften", *Die Gestalt (Abhandlungen zu einer allgemeinen Morphologie)*, 3, 47-68. Discussion of the problem of mathematical existence (are mathematical objects dependent on or independent of our cognitive acts?), with some reference to Gestalt notions.
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- Stempel, W.-D. 1978 *Gestalt, Ganzheit, Struktur: Aus Vor- und Frühgeschichte des Strukturalismus in Deutschland*, Göttingen: Vandenhoeck und Ruprecht.
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- 1898 *Psychologie der Veränderungsauffassung*, Breslau: Preuss und Jünger.
- Stevens, R.C. 1975 "'Closure' and Gestalt Notions on the Visual Memory of Form: A Review", *Journal of General Psychology*, 93, 95-113.
- Stoever, R. J. see Pomerantz, Sager and Stoever.
- Stout, G. F. 1896 *Analytic Psychology*, London: Swan, Sonnenschein, 2 vols. 'An element which is apprehended first as part of one whole, and then as part of another, is presented in two different points of view, and so far suffers transformation.' (I, p.71) Puts forward a view of Gestalt qualities as a new sort of 'simple idea'. See the review by Lipps, *Zeitschrift für Psychologie*, 16, 399-409, and also the following passage by C. Burt:
- After the First World War, when Köhler and Koffka visited England, their accounts of the phenomena of Gestalt were readily accepted. Owing, however, to the strong atomistic tendencies in current German psychology and the strong associationist tendencies of American behaviourism, their doctrines seemed far more revolutionary in Germany and America than they did in this country. To British psychologists they appeared to be providing, by means of a series of brilliant and ingenious experiments, a detailed verification and amplification of the general principles



already clearly formulated by Ward, Stout, and their various followers. Perhaps for that very reason, until quite recently, British psychologists have tended to neglect this field of experimental research. (From the article "Psychology", in A. E. Heath, ed., *Scientific Thought in the 20th Century*, London: Watts, 1951, p.308.)

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- Stromberg, W. H. 1975 *Conceptual Confusions in the Gestalt Psychology of Visual Perception* (Dissertation, University of California at San Diego).
- Struyker Boudier, C. E. M. 1970 "Enkele aspekten van Merleau-Ponty's Wetenskapskritiek", *Gawein*, 18, 147-69. Especially on the significance of Gestalt theory to Merleau-Ponty's work.
- Stucchi, N. 1988 "Seeing and Thinking: Vittorio Benussi and the Graz School", in Simons, ed. See also Funari, *et al.*
- Stumpf, C. 1873 *Über den psychologischen Ursprung der Raumvorstellung*, Leipzig: Hirzel.
- 1883/90 *Tonpsychologie*, 2 vols., Leipzig: Hirzel. Especially in relation to the treatment of the phenomena of fusion.
- 1907 "Erscheinungen und psychische Funktionen", *Abhandlungen der Königlichen Preussischen Akademie der Wissenschaften*, phil.-hist. Kl., 4, 40pp. Defence of a general ontological theory of 'formations' (*Gebilde*), to which category Gestalt-qualities also belong. On Gestalt-qualities see esp. pp.28f.
- 1907a "Zur Einteilung der Wissenschaften", *Abhandlungen der Königlichen preussischen Akademie der Wissenschaften*, phil.-hist. Kl., 5, 97pp.
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- 1907c "Über Gefühlsempfindungen", *Zeitschrift für Psychologie*, 44, 1-49. Expanded version of 1907b.
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- 1924 "Carl Stumpf", in R. Schmidt, ed., *Die Philosophie der Gegenwart in Selbstdarstellungen*, 5, 205-65, Engl. trans. in C. Murchison, ed., *History of Psychology in Autobiography*, Worcester: Clark University Press, vol.1, 389-441.
- 1939/40 *Erkenntnistheorie*, 2 volumes, ed. Felix Stumpf, Leipzig: Barth, esp. I, §§15f. See pp.23-26 above.
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- 1947 "Zur Psychologie des inneren Verhaltens beim Lernen, Denken und Erfahren", *Theoria. A Swedish Journal of Philosophy and Psychology*, 13, 157-82.
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- 1937 *Psychologia postaci* (Gestalt Psychology), Warsaw: Nasza Księgarnia.
- 1951 *Teoria postaci i psychologia postaci – analiza i krytyka* (Gestalt Theory and Gestalt Psychology – An Analysis and Critique), Warsaw: Naukowe Towarzystwo Pedagogiczne.

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- 1968 "Sulle condizione del movimento stereocinetico" in Kanizsa and Vicario, eds., 197-217. On the work of Musatti and Metzger on stereokinetic phenomena and of Hans Wallach on the kinetic depth effect.
- 1975 "'Parts' and 'Wholes' in Children's Visual Perception", in Flores d'Arcais, ed., 256-77. Meili and others have put forward the view that the difference between children's and adults' perceptual experience consists in the capacity of the latter to see 'structured wholes', i.e. to see wholes simultaneously with their parts. Tampieri's experiments show that there is in this respect no general trend in development.
- Tarcsay, W. I. 1938 *A kísérleti akaratvizsgálatok fejlődése* (On the experimental study of volition), Budapest (with German abstract). Includes a critical review of the research on the organization of action by the Lewin school.
- Tausch, R. 1962 "Empirische Untersuchungen im Hinblick auf ganzheits- und gestaltpsychologische Wahrnehmungserklärungen", *Zeitschrift für Psychologie*, 166, 26-61. Investigations of Müller-Lyer figures in the spirit of Rausch.
- Taylor, H. 1932 "The Method of Gestalt Psychology", *American Journal of Psychology*, 44, 356-61.
- Taylor, W. L. 1953 "Cloze Procedure: A New Test for Measuring Readability", *Journalism Quarterly*, 30, 415-33. On the connection between the Gestaltist notion of closure and the exercise of replacing words deleted systematically from a text.
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- 1968      "Gestaltisme" in *Encyclopaedia Universalis* (Paris), 7, 713-17. Includes a discussion of Brentano, Stumpf and the Graz school.
- 1977      *Phenomenology and the Science of Behaviour*, London: Allen and Unwin. See also Michotte and Thinès, and Michotte, Thinès and Crabbé.
- Tholey, P.      1980      "Gestaltpsychologie", in R. A. Sanger and G. Wenninger, eds., *Handwörterbuch der Psychologie*, Weinheim, Basel: Beltz, 178-84.
- 1980a      "Sensumotorik aus gestalttheoretischer Sicht", *Sportwissenschaft*, 10, 7-35.
- 1984      "Sensumotorisches Lernen als Organisation des psychischen Gesamtfelds", in E. Hahn and H. Rieder, eds., *Sensumotorisches Lernen und Sportspielforschung* (Kohl Festschrift), Köln: bps, 11-26.
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- 1922 "Functional Psychology and the Psychology of the Act. II", *American Journal of Psychology*, 33, 43-83; repr. in §§9-19 of *Systematic Psychology. Prolegomena*. New York: Macmillan, 1929, reissue, Ithaca: Cornell, 1972. On Brentano, Witasek, Stumpf, Lipps and Husserl. Defends an ordering of the sciences in terms of dependence, conceiving psychology as 'the science of existential experience regarded as functionally or logically dependent upon the nervous system (or its biological equivalent)' (p.142).
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- Tognazzo, D. P. 1959 "Contributo all'analisi degli effetti causali 'Entraînement' et 'Traction'", *Memorie della Accademia Patavina*, Classe di Scienze Matematiche e Naturali, 71, 3-17.
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- 1932a "Lewin's Concept of Vectors", *Journal of General Psychology*, 7, 3-15.
- 1933 "Gestalt and Sign-Gestalt", *Psychological Review*, 40, 391-411. On seeing things as ends or instruments: the pragmatic motivation of the Gestalt concept.
- 1966 "Eulogy [to Egon Brunswik]", in Hammond, ed., 1-12.
- Tolman, E. C. and Brunswik, E. 1935 "The Organism and the Causal Texture of the Environment", *Psychological Review*, 42, 43-77, repr. in Hammond, ed., 457-86.
- The environment of an organism has the character of a complex causal texture (*Kausal-*

*gefüge*) in which certain objects may function as *local representatives* (*die Stellvertreter*) of other objects; these later to be known as the *entities represented* (*die Vertretenen*).

This function of local representation has, however, two subvarieties.

A. On the one hand, objects or situations may function as local representatives of others in that they provide (with the cooperation of the organism) *means-objects* (*Mittelgegenstände*) to the others; these latter to be known as the goals (*Zielgegenstände*).

B. On the other hand, objects or events may also function as local representatives for others in that, being themselves caused by such other objects or events, they serve as cues (*Anzeichen*) for the latter. (p.483 of reprint)

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| Tolman, E. C. and<br>Horowitz, J. A.             | 1933 | "A Reply to Mr Koffka", <i>Psychological Bulletin</i> , 30, 459-65. Admits that evidence is piling up that the physiology of the brain is molaristic or organized in a Gestalt-like way (p.464), but maintains that neurological and perceptual structures are related functionally, that they are not necessarily isomorphic. See also Postman and Tolman. |
| Tranekjar<br>Rasmussen, E.                       | 1938 | "Undersøgelser over Erkendelsen" (The Investigations of Human Understanding), Unpublished Manuscript, University of Aarhus. On the way in which a part of a perceived sequence may manifest the form of the whole. See From 1971.   |
| Trombini, G.                                     | 1968 | "Estensioni figurali e movimento stroboscopico di trasformazione", <i>Rivista di Psicologia</i> , Anno 62, fascicolo speciale (Pupilli Festschrift), 123-46.  |
| Trombini, G. and<br>Stadler, M.                  | 1970 | "Variabilità percettiva e movimento stroboscopico di trasformazione", <i>Rivista di Psicologia</i> , 64, 107-22.  |
| Trombini, G.,<br>Stadler, M. and<br>Stegnano, L. | 1970 | "Sul movimento stroboscopico di trasformazione quale metodo per misurare proprietà funzionale di 'frammenti' e 'parti' nella percezione figurale", <i>Bolletino della Società Italiana di Biologia Sperimentale</i> , 46, 749-52.   |

On stroboscopic movements of transformation (see Stadler, Stegnano and Trombini, above) as a method for measuring the functional properties of the 'fragments' and 'integral parts' given in figural perception. Experimental confirmation is provided for the hypothesis that the tolerance of identity through transformations is greater if what is added in transformation represents a fragment, rather than a natural part.

- 1970a "Il movimento stroboscopico di trasformazione quale metodo per misurare la pregnanza figurale", *Rivista di Psicologia*, 65, 145-57. Includes a historical survey of work on *Prägnanz* up to and including the work of Rausch, and presents a summary of experimental results lending support to Rausch's theory.
- 1971 "Sul movimento stroboscopico di trasformazione quale criterio funzionale delle proprietà strutturali 'independente' e 'derivata'", *Bollettino della Società Italiana di Biologia Sperimentale*, 47, 116-19. Sets forth examples of stroboscopic movements of transformation serving as a functional criterion for the structural properties 'independent' and 'derived', as set forth by Rausch in his 1966a.
- 1971a "Sul movimento stroboscopico di trasformazione quale criterio funzionale della pregnanza nella percezione figurale", *Bollettino della Società Italiana di Biologia Sperimentale*, 47, 562-65.
- Trombini, G.,  
Stadler, M.,  
Stegnano, L. and  
Cassarà, M. 1971 "Il movimento stroboscopico di trasformazione quale metodo per misurare il rapporto di semplicità fenomenica fra il cerchio ed il quadrato", *Bollettino della Società Italiana di Biologia Sperimentale*, 47, 169-73.
- Tudor-Hart, B. 1928 "Studies in Transparency, Form and Colour", *Psychologische Forschung*, 10, 255-98.
- Twardowski, K. 1894 *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen. Eine psychologische Untersuchung*, Vienna: Hölder, repr. Munich:

Philosophia, 1983. Eng. trans. *On the Concept and Object of Presentations*, by R. Grossmann. The Hague: Nijhoff, 1977.

- Uchiyama, M. 1960 "Experimental Study on the Declining Process of the Form Field – the Field after Figure Disappearance", *Psychologia*, 3, 41-49.
- Ueno, Y. 1926 "Experiments on Perceptual Judgment of Space Bisection", *Japanese Journal of Psychology*, 1, 453-75.
- Uhr, L. 1963 "'Pattern Recognition' Computers as Models for Form Perception", *Psychological Bulletin*, 60, 40-73. Includes discussion of the relation of pattern-recognition research to the Gestalt approach.
- Ullman, G. 1976 "Filling-in the Gaps: The Shape of Subjective Contours and a Model for their Generation", *Biological Cybernetics*, 25, 1-6.
- Urban, G. 1926 "La mélodie", *Journal de Psychologie normale et pathologique*, 23, 198-210.
- Varin, D. 1971 "Fenomeni di contrasto e diffusione cromatica nell'organizzazione spaziale del campo percettivo", *Rivista di Psicologia*, 65, 101-28. Study of diffusion phenomena associated with subjective contours. See also Funari, *et al.*
- Varvel, W. A. 1934 "A Gestalt Critique of Purposive Behaviorism", *Psychological Review*, 41, 381-99. Against Tolman's system, which is accused of being only superficially Gestaltist.
- Veltri, P. 1961 "L'opera di Cesare Musatti", *Aut-Aut*, 64, 297-331.
- Vernon, M. D. 1937 *Visual Perception*. Cambridge: Cambridge University Press.
- Vernon, P. E. 1934 "Auditory Perception. I. The Gestalt Approach", *British Journal of Psychology*, 25, 123-39.
- Vicario, G. 1960 "L'effetto tunnel acustico", *Rivista di Psicologia*, 54, 41-52.



- 1963 "La 'dislocazione temporale' nella percezione di successioni di stimoli discreti", *Rivista di Psicologia*, 57, 17-87.
- 1968 "Il metodo dello 'smistamento' nello studio della preferenza forma-colore", in Kanizsa and Vicario, eds., 241-78. Experiments on separating form and colour preference using slot-sorting techniques.
- 1968a "Un metodo per l'analisi delle forme visive", in Kanizsa and Vicario, eds., 279-95. Extension of Vicario 1968, attempting to separate further dimensions of visual form.
- 1973 *Tempo psicologico ed eventi*. Florence: Giunti-Barbera.
- 1975 "Some Observations on Gestalt Principles of Organization", in Flores d'Arcais, ed., 67-80. Shows that, in conditions very similar to those in which proximity and similarity of elements give rise to their unification, remoteness and dissimilarity can have the same effect. Suggests that the phenomena in question can best be understood in terms of the more general concept of *segregation*.
- 1978 "Un gestaltista legge Neisser", in Kanizsa and Legrenzi, eds., 107-27.
- 1984 "Micro- and Macromelodies", in Spillman and Wooten, eds., 421-35.
- Viney, M.,  
Wertheimer, Michael  
and Wertheimer,  
Marilyn L. 1979 *History of Psychology: A Guide to Information*. Detroit: Gale Research. Bibliography of English-language materials on Gestalt, pp. 182-97.
- Volkelt, H. 1934 "Grundbegriffe [der Ganzheitspsychologie Kruegers]", in *Neue Psychologische Studien*, 12 (Krueger Festschrift: *Ganzheit und Struktur*), 1-45.
- 1934 "Vom Wesen der Ganzqualität", in O. Klemm, ed., *Bericht über den 13. Kongreß der Deutschen Gesellschaft für Psychologie in Leipzig, 1933*. Jena: Fischer, 180-81.

- Voth, A. C. see Brown and Voth.
- Vurpillot, E. 1959 "Vers une psychophysique de la forme". *Année psychologique*, 59, 117-42. See also Bresson and Vurpillot.
- Vygotsky, L. S. 1930 "Strukturalnaja psihologija", in B. A. Fingert and M. Sirvindt, eds., *Osnovnije tečenija sovremennoj psihologii* (Basic Trends in Contemporary Psychology), Moscow: Gossudarstvennoe Izdatelstvo, 84-123. Analyses Gestalt theory as an attempt to overcome the false dilemmas of vitalism vs. mechanism, natural vs. cultural psychology, etc.
- 1930a "Predisloviye k russkomu izdaniyu knigi V. Köhlera: 'Issledovanie intellekta chelovekpod bñih obezyan'", as repr. in Vygotsky 1982, 210-37. Forward to the Russian edition of Köhler's 1917. Points out that Köhler's account of anthropogenesis is consonant with Marxist theory, but insists that tool use in chimpanzees is still accidental as compared to humans. Gives a good review of the contemporary German and Russian debates on the interpretation of Köhler and stands up for a psychophysical monist position based on a theory of isomorphism along Köhlerian lines.
- 1934 "Problema razvitija v strukturno j psihologii" (The Problem of Development in Gestalt Psychology), as repr. in Vygotsky 1982, 238-90. Highly polemical preface to the Russian edition of Koffka 1924. Argues that the Gestalt-theoretical understanding of mental development is too wedded to the chimpanzees of Köhler. The higher mental processes of man, in contrast, manifest a structural dimension of sense or meaning which is (a) social in nature, (b) historically determined, and (c) not covered by the naturalistic principles of Gestalt. Vygotsky is otherwise very sympathetic to Koffka.
- 1962 *Thought and Language*, New York: John Wiley, trans. from the Russian by E. Hanfmann and G. Vacar. Includes discussion of Köhler.

- 1982 *Sobraniye sochineniy, L. Voprosi teorii i istorii psichologii*, Moscow: Pedagogika. Contains Vygotsky's otherwise hardly available introduction to the Russian editions of Köhler and Koffka.
- Waals, H. G. van der and Roelofs, C. O. 1930/31 "Optische Scheinbewegung", *Zeitschrift für Psychologie*, 114, 241-88, 115, 91-190.
- 1933 "Über das Sehen von Bewegung", *Zeitschrift für Psychologie*, 128, 314-54.
- Waiblinger, E. 1913 "Zur psychologischen Begründung der Harmonielehre", *Archiv für die gesamte Psychologie*, 29, 258-70.
- Wallace, S. 1982 "Figure and Ground: The Interrelationships of Linguistic Categories", in P. J. Hopper, *Tense-Aspect: Between Semantics and Pragmatics*. Amsterdam: J. Benjamins, 201-23. On the division between foreground and background in information verbally conveyed and on the implications of this division for an understanding of tense/aspect. Wallace provides an account of foregrounding in terms of the greater or lesser salience of various linguistic categories, the more salient categories (e.g. human, singular, non-third person, present, transitive, actional) tending to be in the foregrounded portions of discourse. He provides a list of various characteristics of figures (thing-like, solid, discrete, etc.), and grounds (diffuse, continuous, etc.), derived from the Gestalt literature.
- Wallach, H. 1935 "Über visuell wahrgenommene Bewegungsrichtung", *Psychologische Forschung*, 20, 325-80.
- 1939 "On Constancy of Visual Speed", *Psychological Review*, 46, 547-52.
- 1949 "Some Considerations Concerning the Relation between Perception and Cognition", *Journal of Personality*, 18, 6-13, repr. in Henle, ed. 1961, 164-71 and in Wallach 1976, 160-69.
- 1976 *On Perception*, New York: Quadrangle. Collection of mainly experimental studies. The

essays deal with colour- and motion-perception, memory, and perceptual adaptation and learning.

- Wallach, H. and O'Connell, D. N. 1953 "The Kinetic Depth Effect", *Journal of Experimental Psychology*, 45, 205-17, repr. in Henle, ed. 1961, 126-45. On the perception of three-dimensional form in monocular vision. See also Köhler and Wallach, Zuckermann and Wallach.
- Warner, D.H.J. 1964 "Resemblance and Gestalt Psychology", *Analysis*, 24, 196-200.
- Wartensleben, G. Gräfin v. 1913 "Über den Einfluß der Zwischenzeit auf die Produktion gelesener Buchstaben", *Zeitschrift für Psychologie*, 64, 321-85. (Köhler, Schumann, Wertheimer are among the subjects.)
- 1914 *Die christliche Persönlichkeit im Idealbild. Eine Beschreibung sub specie psychologica*, Kempten/Munich: Kösel. A Gestalt-theoretical study of personality. Contains a valuable early account of Wertheimer's ideas, probably the first published treatment of Gestalt theory as such. See esp. the discussion of Wertheimer's idea of centering [*Zentrierung*], the grasping of some one factor in such a way as to open the way to the grasping of a whole as hierarchically ordered around it, so that a Gestalt appears where previously organization and intelligibility had been lacking. The most important passage is translated in Ash 1982, pp.301f. See also Michael Wertheimer 1980, pp.13f.
- Washburn, M. F. 1926 "Gestalt Psychology and Motor Psychology", *American Journal of Psychology*, 37, 516-20.
- Watson, G. 1934 "Psychology in Germany and Austria", *Psychological Bulletin*, 31, 755-76.
- Watt, H. J. 1910 "Some Problems of Sensory Integration", *British Journal of Psychology*, 3, 323-47. By English psychologist close to the Würzburg school:
- An intimacy of connexion between *nerve-paths* or impulses emanating from different sense-organs is, of

course, recognized in many forms. But this connexion has been somewhat exclusively considered to consist in a mere *coordination* or association of afferent or efferent impulses with one another. Sufficient attention has hardly been paid to the possibility that upon these afferent impulses an afferent structure might be raised which is dependent upon but essentially an addition to these. To distinguish it from mere coordination, such a structure might well be called *integration*. (p.323f.)

- 1911 "The Elements of Experience and their Integration: or Modalism", *British Journal of Psychology*, 4, 127-204.
- 1913 "The Psychology of Visual Motion", *British Journal of Psychology*, 6, 26-43.
- 1913a "The Main Principles of Sensory Integration", *British Journal of Psychology*, 6, 239-60. Treatment of the integration of sensations and of 'modes' [*Vorstellungen*] in general, similar in many ways to that of the Graz production theory.

Waugh, L. R.

see Jakobson and Waugh.

Weber, A. O.

- 1938 "*Gestalttheorie* and the Theory of Relations", *Journal of Philosophy*, 35, 589-606. Accuses the Gestalt theorists of a confusion of the empirical and the *a priori*. Gestalt apriorism is similar to – it is simply less extreme than – the view that is involved in Bradley's thesis that all relations are internal.

Wegener, J.

see Köhler, *et al.*

Wehrenfennig  
Luterotti, S.

- 1968 "Analisi sperimentale di alcuni fattori di organizzazione percettiva" in Kanizsa and Vicario, eds., 297- 327. Study of relative intensity of competing factors involved in visual organization (regularity, chromatic identity, homogeneity of structure, orientation, and contiguity).

Weinhandl, F.

- 1918 *Experimentelle Untersuchungen zur Analyse des Verstehenserlebnisses. 1. Sinn und Bedeutung* (Dissertation, Graz). Würzburg style experiments on the experience of understanding, sponsored by Benussi.

- 1927 *Die Gestaltanalyse*, Erfurt: Stenger. Chs. 8 and 9 of Book 2 deal, respectively, with Ehrenfels and the Graz school, and with Berlin Gestalt theory. The remainder of the book is somewhat heavily larded with Böhme, Kant, Goethe.
- 1927 "Zum Gestaltproblem bei Aristoteles, Kant und Goethe", *Beiträge zur Philosophie des deutschen Idealismus*, 4, 68-172.
- 1952 "Das Außenweltproblem bei A. Meinong", in K. Radaković, *et al.*, eds., *Meinong-Gedenkschrift*, Graz: Styria, 127-56. On Gestalt-qualities see pp.150ff.
- 1960 "Christian von Ehrenfels. Sein philosophisches Werk", in Weinhandl, ed., 1-10.
- Weinhandl, F., ed. 1960 *Gestalthaftes Sehen. Ergebnisse und Aufgaben der Morphologie. Zum hundertjährigen Geburtstag von Christian von Ehrenfels*, Darmstadt: Wissenschaftliche Buchgesellschaft.
- Weinmann, F. 1904 "Zur Struktur der Melodie", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 35, 340-79, 401-53 (Dissertation, Munich, under Theodor Lipps). Somewhat Pythagorean treatment of tone-relations, but with occasional interesting remarks on melody as organism and on the dependence relations between the parts of a melody on different levels.
- Weizsäcker, V. v. 1933 "Der Gestaltkreis", *Pflügers Archiv*, 231, 630-61.
- 1940 *Der Gestaltkreis. Theorie der Einheit von Wahrnehmung und Bewegen*, Leipzig: Thieme. Defence, somewhat ideological, of an activity theory of perception on the basis of a Gestalt unity of self and environment.
- Welch, L. 1948 "An Integration of Some Fundamental Principles of Modern Behaviorism and Gestalt Psychology", *Journal of General Psychology*, 39, 175-90.
- Welcke, E. 1907 *Kritisches zur Frage der Konsonanz* (Dissertation, Munich).

- 1908 "Einheit und Einheitlichkeit", *Archiv für die gesamte Psychologie*, 13, 254-74. After Lipps. There are three quite differently constituted sorts of unity: of consciousness, of intended object, and of thing. Each corresponds to a different sort of adaption [*Zueinanderpassen*] of parts to each other.
- Wellek, A. 1931 "Zur Geschichte und Kritik der Synästhesie-Forschung", *Archiv für die gesamte Psychologie*, 79, 325-84.
- 1934 "Der Raum in der Musik", *Archiv für die gesamte Psychologie*, 91, 395-443. Distinguishes 3 sorts of space in the auditory world: (1) auditory space itself, a projective image of physical space; (2) tone space, an unfixed, unclear, framework or order-scheme of 3-dimensions; (3) musical space, a space of 'pure feelings' (a matter of expression).
- 1935 "Das Qualitätsproblem der Psychologie. Zu der Broschüre von Othmar Reich", *Zeitschrift für Psychologie*, 136, 116-25. On Reich 1933.
- 1941 *Das Problem des seelischen Seins. Die Strukturtheorie Felix Kruegers: Deutung und Kritik (Zugleich ein Beitrag zur Wissenschaftstheorie und zur Theorie des Charakters)*, Leipzig: Barth, 2nd ed., Meisenheim/Vienna: Hain, 1953.
- 1949 "Zur Theorie und Phänomenologie des Witzes", *Studium Generale*, 2, 171-82.
- 1950 "Ganzheit und Gestalt in der Psychologie", in W. Heinrich, ed., *Die Ganzheit in Philosophie und Wissenschaft. Othmar Spann zum 70. Geburtstag*, Vienna: Braumüller, 293-97.
- 1955 *Ganzheitspsychologie und Strukturtheorie, Abhandlungen zur Psychologie und philosophischen Anthropologie*, Bern: Francke, 2nd ed., 1969.
- 1958 "Die ganzheitspsychologischen Aspekte der Musikästhetik" in E. Schenk, ed., *Bericht über den internationalen musikwissenschaftlichen Kongreß. Wien 1956*, Graz/Köln: Böhlau, 678-88.

- 1959 "Ein Dritteljahrhundert nach Böhlers Krise der Psychologie", *Zeitschrift für experimentelle und angewandte Psychologie*, 6 (Böhler Festschrift), 722-36.
- 1959a "Das Prägnanzproblem in der Gestaltpsychologie und das 'Exemplarische' in der Pädagogik", *Zeitschrift für angewandte und experimentelle Psychologie*, 6, 722-36.
- 1960 "Ganzheit, Gestalt und Nichtgestalt. Wandel und Grenzen des Gestaltbegriffs und der Gestaltkriterien", in Weinhandl, ed., 384-97.
- 1963 *Musikpsychologie und Musikästhetik. Grundriß der systematischen Musikwissenschaft*, Frankfurt: Akademische Verlagsgesellschaft, 3rd ed., 1982.
- Wellek, A. ed. 1954 *Die genetische Ganzheitspsychologie (Neue Psychologische Studien, 15, 3)*, Munich: Beck. Contains a thorough bibliography of the Leipzig school.
- Weltsch, F. see Brod and Weltsch.
- Wenzl, A. 1930 "Der Gestalt- und Ganzheitsbegriff in der modernen Psychologie, Biologie und Philosophie und sein Verhältnis zum Entelechiebegriff", in G. von Hertling, ed., *Philosophia Perennis* (Geysers Festschrift), 2 vols., Regensburg: Habel, 659-84.
- Werner, H. 1919 "Über optische Rhythmik", *Archiv für die gesamte Psychologie*, 38, 115-63.
- 1919a "Rhythmik, eine mehrwertige Gestaltenverketzung. Eine phänomenologische Studie", *Zeitschrift für Psychologie*, 82, 198-218. On optical and spatial analogues of rhythm. Each successive stimulus, taken together with the interval which links it to its successor, is a basic Gestalt. Hence rhythm is a *sequence* of Gestalten.
- 1924 "Studien über Strukturgesetze. I. Über Strukturgesetze und deren Auswirkung in den



- sogenannten geometrisch-optischen Täuschungen", *Zeitschrift für Psychologie*, 94, 248-64.
- 1924a "Studien über Strukturgesetze. II. Über das Problem der motorischen Gestaltung", *ibid.*, 265-72.
- 1926 "Studien über Strukturgesetze. IV. Über Mikromelodik und Mikroharmonik", *Zeitschrift für Psychologie*, 98, 74-89, 101, 159-82. On harmonies and melodies with compression [*Zerdünnung und Verkleinerung*] of tone intervals.
- 1927 "Studien über Strukturgesetze. V. Über die Ausprägung von Tongestalten", *Zeitschrift für Psychologie*, 101, 159-81.
- 1929 "Über die Sprachphysiognomik als einer neuen Methode der vergleichenden Sprachbetrachtung", *Zeitschrift für Psychologie*, 109, 337-63.
- 1932 *Grundfragen der Sprachphysiognomik*, Leipzig: Barth.
- 1935 "Studies on Contour: I. Qualitative Analyses", *American Journal of Psychology*, 47, 40-64.
- 1940 "Musical Microscales and Micromelodies", *Journal of Psychology*, 10, 149-56.
- 1966 "Intermodale Qualitäten (Synästhesien)", in Metzger and Erke, eds., 278-303.
- Werner, H. and Creuzer, H. 1927 "Studien über Strukturgesetze. VI. Über einen Fall von 'Schichtspaltung' beim Bewegungsehen", *Zeitschrift für Psychologie*, 102, 333-37.
- Werner, H. and Lagercrantz, E. 1924 "Studien über Strukturgesetze. III. Experimentell-psychologische Studien über die Struktur des Wortes", *Zeitschrift für Psychologie*, 95, 316-63.
- 1927 "Studien über Strukturgesetze. VII. Strukturierung in lappischen Dialekten", *Zeitschrift für Psychologie*, 104, 201-23.
- Wertheimer, Max 1905 "Experimentelle Untersuchungen zur Tatbestandsdiagnostik", *Archiv für die gesamte*

- Psychologie*, 6, 59-131. Also as Separatum, Leipzig: Engelmann, 1905. Dissertation, under Külpe. Würzburg style experiments designed to establish who has inside knowledge about a given event or state of affairs.
- 1906 "Über die Assoziationsmethoden", *Archiv für Kriminalanthropologie und Kriminalistik*, 22, 293-319.
- 1910 "Musik der Wedda", *Sammelbände der internationalen Musikgesellschaft*, 11, 300-309. Study of material in the Phonogrammarchiv in Berlin. Wertheimer's definition of melody (p.305) reveals the influence of Ehrenfels.
- 1912 "Über das Denken der Naturvölker. I. Zahlen und Zahlgebilde", *Zeitschrift für Psychologie*, 60, 321-78, repr. in Wertheimer 1925a, 105-63, extracted in Ellis, ed. as "Numbers and Numerical Concepts in Primitive Peoples", 265-73. Introduces the notion of *Prägnanz*. Points to the way in which consciousness can have different quantitatively structured objects in different cultural conditions on the basis of the same underlying material. Among the points raised by Wertheimer is the idea that it is probable that not counting but e.g. visual number-forms, and
- natural group- and quantity-structures relative to real biological relationships, constitute the genetically important origin of numerical concepts. The primary structures are probably not such concepts as 1 and continued additions of 1 but conceptually analogous individualized structures. Plurality is not genetically a quantity of identical terms but an articulated whole. (Ellis trans., p.272)
- 1912a "Experimentelle Studien über das Sehen von Bewegung", *Zeitschrift für Psychologie*, 61, 161-265. Also as Separatum, Leipzig: Barth, 1912. Habilitationsschrift, Frankfurt. Repr. in Wertheimer 1925a, 1-105; partial Eng. trans. in T. Shipley, ed., *Classics in Psychology*, New York: Philosophical Library, 1961, 1032-89. Seminal work of the Berlin school.
- What is given psychically in the field of movement? The standard thesis is...: the positions between the objects

are subjectively filled [*ergänzt*]. (And one could add the a priori proposition that movement is inconceivable without an object or a seen thing that moves.)

Wertheimer rejects this interpretation, showing that there are cases of pure movement which 'have nothing to do with the subjective between-positions: the beginning and end state is there, and the movement, but no movement of' (cf. p.61 of repr.). Raises for the first time the so-called Wertheimer-problem: What is the nature of those brain processes which are the immediate physiological representatives of the Gestalt wholes experienced in perception?

- 1918 "Vom Geistesleben des Prager Judentums", in *Das jüdische Prag. Eine Sammelschrift*, Prague: Verlag "Selbstwehr", repr. Kronberg/Taunus: Jüdischer Verlag im Athenäum Verlag, 1978, p.16.
- 1920 *Über Schlußprozesse im produktiven Denken*. Berlin and Leipzig: De Gruyter, 22pp. repr. in Weingartner, 1925a, 164-84, extracted in Ellis, ed. as "The Syllogism and Productive Thinking", 274-82; Eng. trans. as "Syllogisms in Productive Thinking", *Psychological Reports*, 1981, 49, 395-412. Argues for a logic that would do justice to the processes of thinking as they actually occur. How does it happen that the same logical operation can in some circumstances have consequences that appear empty or sterile or merely classificatory and in others give rise to the feeling that one has truly advanced? Wertheimer argues that a form such as the Barbara figure of the syllogism may either appear as a mere summative whole, where M serves as a bridge between S and P, or it may appear as a specific type of Gestalt, where M stands to S and P in a non-trivial relation. In the latter case the premisses are refashioned, we come to achieve a grasp of the internal structure of the relevant state of affairs as a result of having carried out the operation in question. (And Wertheimer's talk here of the 'specific laws' governing the 'formal moments' of such structures and of the 'internal structural connections within them' may suggest the

influence of Husserl's conception of logic in the *Logical Investigations*.) Wertheimer's examples show that inferential thinking may bring about a sudden switch in one's apprehension of the subject. Wertheimer gives a series of examples in which what appear to be two derived designations for the same object in fact refer to logically different objects. The idea is illustrated by examples from the history of science (e.g. comprehension of stellar movements).

- 1922 "Untersuchungen zur Lehre von der Gestalt. I. Prinzipielle Bemerkungen", *Psychologische Forschung*, 1, 47-58, extracted in Ellis, ed., 12-16 and in Focht 1935, 107-11. Critique of mosaic or bundle-thesis, i.e. the thesis that:

At the basis of everything 'complex' [in experience] there lies in the first place, as its foundation, the sum of elementary contents, constituent parts (sensations, etc.), side by side. One has ultimately to do with a summative manifold of different types of constituent pieces (a 'bundle'); everything else is somehow built up out of additive sums [Und-Summe] of elements. (p.48f.)

and of the thesis of association:

If a content *a* has been often present together with another content *b* ('in spatio-temporal contiguity'), then there exists a tendency, that the occurrence of *a* should bring with it the appearance of *b*.

Further development of the theory of summative and non-summative wholes (cf. Köhler 1920, Rausch 1937).

- 1923 "Bemerkungen zu Hillebrands Theorie der stroboskopischen Bewegungen", *Psychologische Forschung*, 3, 106-23.

- 1923a "Untersuchungen zur Lehre von der Gestalt. II", *Psychologische Forschung*, 4 (Stumpf Festschrift), 301-50, extracted in Ellis, ed., 71-88, in Focht 1935, 111-16, and in Beardslee and Wertheimer, eds., 115-35 as "Principles of Perceptual Organization":

I stand at my window and see house, trees, sky. And now, for theoretical reasons, I could be tempted to

count off and say: here are...327 brightnesses (and hues). But do I really have "327" before me? No: sky, house, trees; the having of "327" as such can be realised by no one. (p.301)

Attempts to lay the ground for laws governing configuration, principally on the basis of experiments with dot-formations. Contains the first discussion of Prägnanz-tendencies in perception.

1924 Review of Rotschild 1923, *Psychologische Forschung*, 5, 365-67.

1925 *Über Gestalttheorie*, Erlangen: Philosophische Akademie, repr. in *Symposion. Philosophische Zeitschrift für Forschung und Aussprache*, 1, 1927, 39-60, extracted in Ellis, ed. as "Gestalt Theory", 1-11; Eng. trans. with Foreword by K. Riezler, in *Social Research*, 11, 1944, 78-99. The lecture was delivered to the Berlin Kant-Gesellschaft in December 1924. The whole of Gestalt theory is embraced in a thesis to the effect that there exist natural circumstances in which what happens in the whole is not conditioned by the nature of the parts or their mode of combination, but on the contrary, what occurs in any part of the whole is determined by the laws relating directly to this whole.

There are contexts [*Zusammenhänge*] where the behaviour of the whole is not determined by the nature and combination of the individual pieces, but in contrast where, in the pregnant case, that which happens in a part of this whole is determined by inner structural laws of this whole (p.43).

What is given to me by the melody does not arise...from the sum of the pieces as such. Instead, what takes place in each single part already depends upon what the whole is. The flesh and blood of a tone depends from the start upon its role in the melody: a b as leading tone to c is something radically different from the b as tonic. It belongs to the flesh and blood of the things given in experience, how, in what role, in what function they are in the whole (p.47).

1925a *Drei Abhandlungen zur Gestalttheorie*, Erlangen: Philosophische Akademie, repr.

- Darmstadt: Wissenschaftliche Buchgesellschaft, 1967. Reprints of 1912, 1912a, 1920.
- 1927 "Gestaltpsychologische Forschung", in E. Saupe, ed., *Einführung in die neuere Psychologie (Handbücher der neueren Erziehungswissenschaften, 3)*, Osterwieck/Harz: Zwickfeldt, 46-53.
- 1933 "Zu dem Problem der Unterscheidung von Einzelinhalt und Teil", *Zeitschrift für Psychologie*, 129, 353-57, Eng. trans., "On the Problem of the Distinction between Arbitrary Component and Necessary Part", in the enlarged edition of Wertheimer 1945. Defends a conception of part in terms of role or function within a whole (in an array of points, for example, the opposition between member, endpoint, boundary-point, limit-point, basis, peak, etc.).
- 1934 "On Truth", *Social Research*, 1, 135-46. repr. in Henle, ed. 1961, 19-28. Defence of 'Gestalt axiom' that the processes involved in cognition are universal to all human cultures. Wertheimer's account of truth is holistic – statements have truth-values only in relation to certain fields or contexts.
- 1935 "Some Problems in the Theory of Ethics", *Social Research*, 2, 353-67, repr. in Henle, ed. 1961, 29-41. Puts forward the view that there are universals of evaluation, and drives home the need to investigate the psychological and logical structures involved in evaluation.
- 1945 *Productive Thinking*, 1st ed., New York: Harper, enlarged ed. 1959 (London: Tavistock, 1961), with Wertheimer bibliography. Includes studies of Galileo and Gauß together with an account of the origins of relativity theory with remarks of Einstein on mathematical heuristics (on the making of discoveries by apparently unmotivated transformations of physical equations).
- 1959 "On Discrimination Experiments. I. Two Logical Structures" (ed. L. Wertheimer),

*Psychological Review*, 66, 252-66. In the first structure the correct discrimination response occurs on the basis of the subjects apprehension of absolute qualities; in the second it occurs on the basis of recognition of position in relational structures. The kind of remembering called for in the latter is very much easier than the memory for absolute structures required by the former. Wertheimer raises the question as to whether either sort of structure is reducible to the other.

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| Wertheimer, Max<br>and Klein, J. | 1904 | “Psychologische Tatbestandsdiagnostik”, <i>Archiv für Kriminalanthropologie und Kriminalistik</i> , 15, 72-113. See also Hornbostel and Wertheimer.   |
| Wertheimer, Michael              | 1958 | “The Relation between the Sound of a Word and its Meaning”, <i>American Journal of Psychology</i> , 71, 412-15. On the properties of words whose sound seems appropriate to their meaning.  |
|                                  | 1960 | “Studies of Some Gestalt Qualities of Words”, in Weindhandl, ed., 398-405.  |
|                                  | 1965 | “Relativity and Gestalt: A Note on Albert Einstein and Max Wertheimer”, <i>Journal of the History of the Behavioral Sciences</i> , 1, 86-87. Includes a preface written by Einstein for a projected collection of Max Wertheimer’s later essays.          |
|                                  | 1980 | “Max Wertheimer, Gestalt Prophet”, <i>Gestalt Theory</i> , 2, 3-17. Survey of Wertheimer’s life and development.  |
|                                  | 1982 | “Gestalt Theory, Holistic Psychologies and Max Wertheimer”, <i>Zeitschrift für Psychologie</i> , 190, 125-40. See also Viney, <i>et al.</i>   |
| Wever, E. G.                     | 1927 | “Figure and Ground in the Visual Perception of Form”, <i>American Journal of Psychology</i> , 38, 194-226.  |
|                                  | 1928 | “Attention and Clearness in the Perception of Figure and Ground”, <i>American Journal of Psychology</i> , 40, 51-74. Clearness is the presence of something that can be reported upon; this implies a dependence of clearness on figure-ground structure. |

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- 1931 *The Laws of Human Nature*, London: Nisbet.
- Wheeler, R. H., Perkins, F. T. and Bartley, S. H. 1931 "Errors in the Critique of Gestalt Psychology. I. Sources of Confusion", *Psychological Review*, 38, 109-36.
- 1933 "*Idem.* II. Confused Interpretations of the Historical Approach", *Psychological Review*, 40, 221-45. Argues that James and Titchener are too Aristotelian, too wedded to the opposition between unity and multiplicity, to be counted as true precursors of Gestalt psychology.
- 1933a "*Idem.* III. Inconsistencies in Thorndike's System", *Psychological Review*, 40, 303-23.
- 1933b "*Idem.* IV. Inconsistencies in Woodworth, Spearman and McDougall", *Psychological Review*, 40, 412-33. Critique of mechanism.
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- Wiesenforth, G. see Ehses and Wiesenforth.
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- 1982 *Catastrophe Theoretic Semantics. An Elaboration of René Thom's Theory*, Amsterdam: J. Benjamins. Approach to semantics resting on a repertoire of linguistic Gestalten or dynamic archetypes corresponding in part to the structures distinguished by Michotte in his work on attribution of causality. See pp.34-37 above.
- 1985 *Dynamische Sprach- und Weltauffassungen (in ihrer Entwicklung von der Antike bis zur Gegenwart)*, Zentrum philosophische Grundlagen der Wissenschaften, Universität Bremen, Schriftenreihe 3.
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- Winthrop, H. 1947 "Major Errors of Configurationism, with special reference to Gestalt Psychology", *Journal of General Psychology*, 36, 139-49.

- Wirth, W.                      1934      "Zur Berücksichtigung der Bewußtheitsgrade in der Gestalttheorie", in O. Klemm, ed., *Bericht über den 13. Kongreß der Deutschen Gesellschaft für Psychologie in Leipzig, 1933*, Jena: Fischer, 185- 87. On attention and consciousness of Gestalten and specifically on Koffka's thesis that the Gestalt concept renders the notion of attention unimportant for psychology.
- 1934a      "Zu den Bewußtseinsphänomenen der Gestalt-auffassung", *Archiv für die gesamte Psychologie*, 91, 507-38.
- Witasek, S.                      1895      *Untersuchungen zur Complexions-Theorie* (Dissertation, Graz, under Meinong). On the presentation and comparison of complexes and on the lower and higher-order dispositions associated therewith.
- 1896      "Versuche über das Vergleichen von Winkelverschiedenheiten", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 11, 321- 32. On Graz experiments of A. Keiter and C. Franz.
- 1896a      "Über willkürliche Vorstellungsverbindung", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 12, 185-225. How is it possible deliberately to have something given in presentation – to *will* that something be presented – given that the act of will is itself such as to include an act of presentation? Witasek deals with this problem by distinguishing intuitive from non-intuitive presentations, and the present essay is a study of the processes involved in passing deliberately from the non-intuitive to the intuitive (e.g. when instructed to imagine a square, or to sing the sequence C-E-G). Intuitive and non-intuitive contents must bear a specific relation to each other, and this relation, too, according to Witasek, must be brought to presentation – in sharp contrast to those cases where one presentation is related to another merely by association.

- Witasek, S. (cont.)
- 1897 "Beiträge zur Psychologie der Komplexionen", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 14, 401-35.
- 1897a "Beiträge zur speziellen Dispositionspsychologie", *Archiv für systematische Philosophie*, 3, 273-98.
- 1898 *Über die Natur der geometrisch-optischen Täuschungen*, Leipzig: Barth, and in *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 19, 1899, 81-174 (Habilitationsschrift, Graz). Attempts to determine the range of applicability of psychological and physiological explanations of optical illusions. Optical illusions cannot be a matter of judgment (cannot be what Meinong called *Urteilstäuschungen*), since even when simultaneously judging correctly we are still misled by what we see. They must be illusions of sensation. See Lindenfeld, ch. 9, pp.232ff.
- 1898a Review of Höfler 1897, *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 16, 198-208.
- 1901 "Über Hören und Musiciren", *Das Wissen für Alle*, no.22- 24, 32pp. Popular introduction, including treatment of feelings associated with listening to music.
- 1904 *Grundzüge der allgemeinen Ästhetik*, Leipzig: Barth; Italian translation, *Principii di estetica generale*, Milan: Remo Sandron, 1913. Employs ideas on Gestalt deriving from Meinong and Ehrenfels as part of a psychological theory of aesthetic experiences.
- 1907 "Über Lesen und Rezitieren in ihren Beziehungen zum Gedächtnis", *Zeitschrift für Psychologie*, 44, 161-85, 246-82. On rote-learning and its relation to memory and to the economy of learning.
- 1907a "Methodisches zur Gedächtnismessung", in F. Schumann, ed., *Bericht über den 2. Kongreß für experimentelle Psychologie in Würzburg, 1906*, Leipzig: Barth, 202-203.

- 1907b "Zur allgemeinen psychologischen Analyse des musikalischen Genusses", in *Bericht über den 2. Kongreß der internationalen Musikgesellschaft, Basel, 1906*, Leipzig: Breitkopf und Härtel, 111-28.
- 1908 *Grundlinien der Psychologie*, Leipzig: Dürr; 2nd ed. Leipzig: Meiner, 1923. Three sorts of *Vorstellungsproduktion* are distinguished: Gestaltproduction, comparison-presentation and connection-presentation (the latter corresponding to the function 'and').
- 1909 "Zur Lehre von der Lokalisation im Seh-raume", *Zeitschrift für Psychologie*, 50, 161-218. On the mechanisms of binocular vision and specifically on the interrelations between the retina of both eyes and corresponding points in the respective visual fields and on the coincidence of the latter.
- 1909 "Lokalisationsdifferenz und latente Gleichgewichtsstörung", *Zeitschrift für Psychologie*, 53, 61-96. Response to criticism of F. Hillebrand.
- 1910 *Psychologie der Raumwahrnehmung des Auges*, Heidelberg: Winter. The work is divided into two parts, reflecting the two-storey character of the Graz production theory. Chs. 1 and 2 deal with *immediate* visual experience, chs. 3 and 4 with *produced* visual experience, i.e. (i) the perception of spatial Gestalten, (ii) the perception of motion, (iii) the perception of depth, perspective, distance, magnitude. Witasek stresses that a moment of production is present already in the perception of objects, i.e. before judgment comes into play. The work defends a nativist position with regard to the perception of space, in some respects parallel to that of Stumpf.
- 1910a "In Sachen der Lokalisationsdifferenz (Zur Klärung und Abwehr)", *Zeitschrift für Psychologie*, 56, 85-103. Response to Hillebrand.

- 1918 "Assoziation und Gestalteinprägung. Experimentelle Untersuchungen, bearbeitet von A. Fischer", *Zeitschrift für Psychologie*, 79, 161-210. See also Höfler and Witasek, Meinong and Witasek. A more extensive Witasek bibliography is given in Smith 1988.
- Witte, W. 1952 "Das Erlebnis der Grenze und die Grenzen des Erlebens und Verhaltens", *Studium Generale*, 5, 604-16 (on Rubin, Selz, Lewin).
- 1952a "Zur Geschichte des psychologischen Ganzheits- und Gestaltbegriffs", *Studium Generale*, 5, 455-64.
- 1960 "Struktur, Dynamik und Genese von Bezugssystemen", *Psychologische Beiträge*, 4, 218-52.
- 1960a "Über Phänomenalskalen", *Psychologische Beiträge*, 4, 645-72.
- 1960b "Transposition als Schlüsselprinzip", in Weinhandl, ed., 406-412.
- 1966 "Haptik", in Metzger and Erke, eds., 498-517.
- 1966a "Das Problem der Bezugssysteme", in Metzger and Erke, eds., 1003-27.
- 1975 "Zum Gestalt- und Systemcharakter psychischer Bezugssysteme", in Ertel, *et al.*, eds., 76-93. Is a reference system a system in the sense of systems theory? Witte's paper includes a comparison of Gestalt theory and systems theory and points to the Gestalt character of reference systems.
- Wittmann, J. 1921 *Über das Sehen von Scheinbewegungen und Scheinkörpern. Beiträge zur Grundlegung der analytischen Psychologie*, Leipzig: Barth.
- 1923 "Über das Gedächtnis und den Aufbau der Funktionen. Eine experimentelle Untersuchung über das An- und Abklingen der Reproduktionen taktiler, akustischer und optischer Eindrücke", *Archiv für die gesamte Psychologie*, 45, 203-65. Includes a powerful critique of the constancy hypothesis.

- 1924 "Raum, Zeit und Wirklichkeit", *Archiv für die gesamte Psychologie*, 47 (Part III of Martius Festschrift), 428-511 and in G. Martius and J. Wittmann, *Die Formen der Wirklichkeit. Festbeitrag zu Kants 200-jährigem Geburtstag*, Leipzig: Akademische Verlagsgesellschaft, 5-81. (Bound together with an essay by G. Martius on Kant's theory of categories.) On the need to give up the notions of sensation and of psychic element. Cognition is a matter of analysis not (*pace* Kant) of synthesis.
- Wohlfahrt, E. 1932 "Der Auffassungsvorgang an kleinsten Gestalten. Ein Beitrag zur Psychologie des Vorgestalterlebnisses", *Neue Psychologische Studien*, 4, 347-414.
- Wolf, K. L. 1941/43 *Theoretische Chemie. Eine Einführung vom Standpunkt einer gestalthaften Atomlehre*, in 3 parts, Leipzig: Barth. Application of ideas on Gestalt (= invariant structure) to the foundations of chemistry. Puts forward four properties of Gestalten (Part I, p. 14):  
 1. the Gestalt has no parts: it is either there as a whole or not at all,  
 2. the Gestalt has no fixed size or quantity—it can obtain unchanged in a small or in a large mass,  
 3. the Gestalt reproduces by producing copies of itself,  
 4. Gestalten can occur in arbitrarily large numbers in one and the same body.
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- Wolgast, E. 1960 "Seemachtslehre als Staatslehre—Gestalthaftes Sehen", in Weinhandl, ed., 417-26.  
 1961 *Seemachtslehre als Staats- und Gestaltlehre*, Tübingen (Privatdruck), 32pp. Discussion of Gestalt laws in the political and military sphere, with special reference to British naval power.
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*Psychologische Forschung*, 1, 333-73, extracted in Ellis, ed., as "Tendencies in Figural Variation", 136-48. Critique of G. E. Müller's theory of the *directional image* [*Richtungsvorstellung*] as an account of the way in which memory images converge in such a way as to reveal a tendency to maximize *Prägnanz*. Wulf shows that it is not the process of *convergence* which is crucial, but rather the stable forms towards which memory images converge. See Gibson 1929. Wulf's methodological errors are now recognized.

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- Zama, A. see Galli and Zama.
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