How is critical social research possible? ¹

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It is normally assumed that critical social research should serve to expose social problems, describe them, evaluate them and explain their causes. For example, new forms of poverty, juvenile crime, temporary employment, suicide, discrimination against women, nationalistic and racist prejudice, loneliness in old age etc. This is not dealt with here. This type of research sets itself apart from ‘non critical’ research in that its object is seen as unacceptable or in need of improvement, regardless of the type of research used. Criticism is present right from the start. It is not a product of the research itself. Or to be more precise, it is not a product of the further clarification of the state of affairs (Sachverhalte).

The question which we are concerned with: what conditions are required for social research to be self critical and not just critical of the conditions which it describes? The form of a type of research influences its content.

I. Common understanding of the term criticism

If I criticise a person, a state of affairs or a text, then I compare them with a standard, whatever its origins may be. I may find someone too pushy, too superficial, unreliable or to be the model of virtue and beauty – my decision is only possible by comparing them with a certain condition that serves as an evaluation standard. The same applies to objects. An item of clothing might be ‘too short’ or ‘too long’ compared to another item that seems to ‘fit just right’.

This can be demonstrated in more detail using the following example. Imagine that there are two lines of different lengths. One is ‘shorter’ when compared to the other, and the other is ‘longer’ when compared to the first. I am comparing the lines with each other. If I decide that the first line is the ‘right length’, then the other line is ‘too short’ or ‘too long’. If I decide that the second

line is the ‘right length’, then the same applies only vice versa. We therefore see that criticism arises not as a result of the comparison itself, but only through emphasis, by setting a standard and then making comparisons to it. Or better put, it arises when I compare one against the other, as the comparison is an act of criticism.

If I should then decide to compare my two lines to a centimetre scale the element of criticism seems to disappear. What actually happens is that the emphasis is no longer on the subject-object relationship and the focus has moved to the subject, so I might say that: “x centimetres is too short for me”. As a result, the object now enjoys ‘measurement objectivity’ (Objektivität der Messung), which in turn is free from criticism. But this objectivity only exists because it relates to a seemingly value-free set of standards – the universally binding nature of the centimetre scale. But this scale is based on convention, which is based on the circumference of the Earth, so that what I should actually be saying is: “When compared to the earth’s circumference (or an x-th part of it), this line is ‘shorter’ or ‘longer’. And I therefore define this part as a standard that is ‘too short’ or ‘too long’.”

In order to understand the process of criticism it is necessary not just to take comparisons and evaluations into account, but to ask oneself, where this set of standards is localised, which in turn leads to the important question: how this position is to be justified.

II. Exogenous criticism: the problem of position

In everyday life, most positions from which criticism is expressed act in an external manner on the object being criticised. A child should behave, an employee should do as he is told, a citizen should vote, pay taxes and act in an appropriate manner. People or social groups, directly or indirectly promote certain types of behaviour. Émile Durkheim emphasised the coercive nature of social norms, as they also act, when they are introjected: so that one does what one is supposed to.

As well as social norms we experience the requirements of moral theology and Christian ethics as external to human needs or even opposed to them. The Lord’s commandments as a set of standards for human behaviour are initially exogenous to these needs. As God is said to have created man, he has both good and evil invested in him, so that the inner can correspond with the outer.

Kant’s critiques can be seen as the highpoint of exogenous criticism in
idealistic philosophy. Here critical instances, applied to nature, freedom and art are based on reason. Pure reason or reason as the criticism of the faculty of cognition, practical reason as criticism of the faculties of desire, will and action and judgement as criticism of the feeling for the beautiful and the sublime. Regulators safeguard against subjective criticism: the universally valid nature of a priori knowledge in the critique of pure reason, the universal nature of moral law in the critique of practical reason and the maxim of disinterested pleasure in the critique of judgement (Kant, 1781; 1788; 1790).

Critical rationalism is particularly important in more recent critical directions in the methodology of social research. It emphasises formal logic as the basis for the reconstruction of reality to the extent that statements about things become the object of research, rather than things on themselves (Opp, 1976). As with Kant’s critiques the position for observation of the objects being judged is exogenous.

The ‘ideal type’ (Idealtypus) of German sociology from the beginning of the century and the numerous typologies in the psychology of the 1920’s and 1930’s are also formed from an exogenous position. Types are constructed according to particular criteria from experienced or experienceable reality, which reality can be measured against. Max Weber’s ideal type for example, is a goal-rational (zweckrational) model freed from all irrational embellishment for encountered social action, whose evaluation enables: Idealisation and typing according to standards as a research method determined by the researcher, which are external to the object of research itself (Weber, 1918/20, p. 2; more general p. 9, p. 10; 1904, p. 190).²

III. Endogenous criticism: the problem of reality

Seemingly randomly determined positions and standards to evaluate the world become ordered when viewed in their historical context, as they are products of a particular period in time. Not everything is possible at all times and what is possible changes in specific ways. One might question whether external observation of problems can ever be anything other than an anachronistic, behind the times, dated view of a world which is external to it as it cannot keep pace with it in the first place.

Today, an Augustinian view of the Christian universe is exogenous. However, in the 4th century it might well have been immanent with God as the

² To emphasise the historical context of ideas the text gives the year of first publication, the quotations are from the editions cited.
origin, centre and end of the universe. Cartesian doubt treats nothing as real other than doubts themselves, which laid the basis for thought from which criticism is possible, with self-imposed rules for recognizing what is true and false. What today appears as rationalistic one-sidedness was a revolutionary idea back in the middle of the 17th century, which thematised the individualisation of society and the instrumentalisation of the world through rational thought and technology. Dramatic, political and economic changes, such as those following the French Revolution and at the beginning of the 19th century were accompanied by a rapid transformation of philosophical positions regarding views of the world and its critique. Kant’s critique defined the boundaries of the application of reason and divided consciousness into perception (Sinne, Anschauung) and thought (Denken). Hegel’s theory goes further than Kant’s, in that among other things, they reify reason and dynamise it in a philosophy of history, which restores unity through movement. Feuerbach criticises Hegel by returning to the notion of a Christianity based on the needs of mankind, the younger Marx’s critique of Feuerbach conceives man not as passive, but rather as a working and social being, as a species (Gattung) from which the contemporary individual is isolated and alienated. This ‘humanistic’ position is also shared by the young Engels. The later Marx recognised that the law of value (Wertgesetz), inherent to the capitalist mode of production, enabled a critique of the traditional and modern manifestations of the political economy. The dialectic in the Marxist approach is critical in that it conceives a “fluid state, in motion, and therefore … its transient aspect as well” (Marx, 1873, p. 27, p. 28).

Looking back at the past, one can see the series of positions as a process of going-into-the-objects or, if one perceives them as being in motion, keeping up with the time in question. In order to understand the developed form of reality, it is necessary to see prior forms of comprehending reality as preliminary stages (Marx, 1867, p. 74).

Immanent criticism must therefore be seen as a problem of comprehending reality (Wirklichkeitsverständnis) and not as a problem of position or standard. Critical positions are critical to the extent that they are real.

Let us look at the potential for critique of three types of empirical social research, by questioning their concept of reality: measuring, interpretive and ‘critical’ social research.

IV. Towards a critique of ‘measuring’ social research

By ‘measuring’ we refer here to the scientific orientated social research, which
has become the dominant form of research since the 1940’s in the United States and since the end of the war in the Federal Republic of Germany and most other European countries, including former Socialist Eastern Europe. This is clear from social science text books and contributions to journals discussing methodology. It is based on an understanding of reality, which, although it might be expressed in different degrees, represents the analytical philosophy, neopositivism, critical rationalism and logical empiricism or physicals of the Vienna Circle (Wiener Kreis).

The external characteristics of this direction of research – roughly summarized – include: (a) testing hypotheses (b) developing and applying measurement methods to establish the distribution of characteristics, (c) a high level of abstraction from this process, (d) the reconstruction of reality through formalised models and (e) claims of comparability, generalisability and objectivity (see Friedrichs, 1973).

The critical potential of ‘measuring’ social research has its origins in the observation of the measuring process itself. Measuring means comparing findings with a standard. The dual pole subject-object-relationship is divided into three relationships by the interposition of a measuring instrument: subject-standard-object. The division of subject and object by the standard is prerequisite for the experienced reification of the measurement. However, it is also subjectivised through this process, because the standard is defined by the researcher, even if, the same as in scientific measuring, it is generalised by conventionalisation. When applied to psychological and social processes, scientific measurements are extraneous to their subject. For example, what does part of a journey have to do with the earth’s circumference, a boring event with the rotation of the earth or a baby’s weight with the earth’s gravitational pull? And yet experienced distance, time and weight are measured in meters, minutes and grams.

The picture of reality that gives rise to measuring research comes from the same source, namely (subjective) setting of standards and their codification. Reality appears as quantifiable, divisible, comparable in its elements, as stable and, at least at the time of measuring, as immobile. It appears as changeable within the set categories, as long as the limit values are not exceeded. Measuring social research in particular, simplifies processes and relationships – as recognised by Ernst Mach in his important drive to promote quantification in the sciences (simplicity, differentiability and clarity of nomenclature of figures Mach, 1980, p. 322). The benefits of quantification can only be achieved in the social sciences by means of reification (objectification, materialisation – ‘Verdinglichung’), instrumentalisation and a mechanistic world view.
If the research process is materialised or reified, criticism is reduced to a subjective residual that is independent to the method and left to the researcher and his conception of himself. The critique of measuring social research centres on its subjective concept of criticism.

V. Towards a critique of interactionist (‘interpretative’) social research

Out of all the different types of non-measuring or qualitative social research, the pragmatic and interactionist approach merits greatest attention as it has the most developed methodology. It was adopted particularly in the Federal Republic of Germany from the early 1970’s – the second wave of taking up research methods from the United States after measuring social research coupled with deductive methodology. Both of the scientific directions behind this mode of research come from what Herbert Blumer called ‘Symbolic Interactionism’, whose ideas were developed from the early Chicago School and are based in turn on the ethnomethodology of Alfred Schütz and Edmund Husserl. Herbert Blumer (1969) and Thomas Wilson (1970) lectured on the respective core assumptions. I will try to summarise both approaches here.

(a) Social interaction takes place based on meanings. (b) Meanings or symbols come about through an interpretative process in interaction. (c) Objects are also “created, confirmed, transformed and discarded”. (Blumer, p. 91) (d) Interpretation is ‘documentary’, i.e. conceives appearances as an expression of an underlying model, which is dependent on them (‘Indexicality’, Wilson, p. 60). (e) Reality as repeatability and regularity arises through reflexivity of the processes, which constitute them (Wilson, p. 71).

If social interaction is controlled by meanings, which themselves arise through social interaction, then the actor is part of the field of action which he creates. By the same token, he interacts reflexively to objects in his environment: the world is the interpreted image of the world; the actor is part of it. As general everyday rules apply to social interaction, they also apply to a researcher who must also therefore come to terms with his subject in an equally interactive manner. The social environment is a product of social interaction, but is also therefore limited by these interactive and symbolic areas (Concept of the ‘Lifeworld’, Schütz, Luckmann, 1975; see also Berger, Luckmann, 1972; also earlier William I. Thomas’ ‘Situations’ concept).

The restrictive nature of this interactive area is the first important aspect for describing the world view behind this approach to research. The second is its concrete nature: it is meaningful, relevant to everyday life and can be case-
based. The third aspect is the continuous activity, the reconstructive dynamic, which is inherent within it.

An approach to research based on these premises can only be critical if it remains within this area of interaction. It criticises the subjective critical concept of measuring social research, in that it counterposes it with an interactive, social-psychological, everyday world concept. But it also constructs its own limits. The creation of a world of interaction is synonymous with its exploration; the everyday methods of its interpretation are also those of science. This being true, it would still be wrong to limit social scientific endeavours for knowledge to just this. The conditions, under which interactive and life worlds arise, that which acts upon them ‘from outside’, namely society, are hidden if one only uses the everyday life interpretation concept. Circumstance concerning society as a whole, neither economic nor historical cannot be conceived using this concept. The area of interaction itself is also reduced to interpretative and interactive processes. As the interacting parties adapt their interaction with one another, unity arises through conformity. Contrast and contradictions are removed. In this manner, the critical potential of interpretative and interactionist sociology goes beyond measuring social research, as its reality and criticism concepts replace the subjective with the interactive-social. However, this is only made possible by neglecting wider areas of social reality.

VI. Towards a critique of critical social research

Critical social research has remained a torso up to this point. Social philosophical ambitious theories were linked in different attempts in order to master empiricism; there is no one complete methodology.

The discussion between Theodor W. Adorno and Karl Popper, amongst others, in 1961 during the so-called ‘Positivismusstreit’ suggested the impression that the primarily opposing positions were critical rationalism (‘Positivism’) and the dialectic (Adorno, 1969). The debate concerned the philosophy of science, not research methodology. Nevertheless, it was clear that Popper’s approach corresponded to logical-empirical research and that Adorno’s social philosophical approach did not rely on empirical examples. One might have doubts about if and how Adorno’s later philosophy, which dissolved into criticism (1951, 1966), might be poured into a research methodology (Adorno, 1970). In my opinion, later revisers were not successful in this respect (see Ritsert, 1972, 1976; Bonß & Honneth, 1982).

In contrast, Jürgen Habermas, reminiscent of the division into the natural
sciences and the humanities in the later 19th century, counterposed the hermeneutical-historical sciences against the analytical-nomological sciences. With the latter divided into phenomenology, linguistics and hermeneutics (1970). His emphasis on linguistic analysis and hermeneutics certainly helped to support the creation of hermeneutical research methods. The philosophical-hermeneutical suggestion for a meta-analysis of language is subject to the validity of Gadamer’s ‘Universal Aspect of Hermeneutics’ (1960, p. 449 f.) at least for the humanities (see Habermas, 1970) and requires operationability not just for criticism as an idea, but also in practice. In his ‘Theory of Communicative Interaction’, Habermas upholds the critical claim of his approach as an “alternative to a philosophy of history that has become untenable” (1981, p. 583); he recommends the study of Marxist ‘real abstraction’ (Realabstraktionen) using a ‘genetic structuralist’ research approach. The social research of the Frankfurt Institute was regarded as exemplary up until the beginning of the 1940’s (p. 554, p. 555). He argues that theory of society should no longer be carried out indirectly as critique of ideology (p. 583). However, he does not discuss its implications for research strategy or research technique.

Neither has critical psychology, even with materialistic foundation and new formulation of the subject concept (Holzkamp, 1985) been capable of putting forward its own methodology as of yet. ¹

Instead one is forced to return to the empiricism of earlier critical theories. The completed research works present us with two very different directions of research. To put it simply: a sociocritical and an ideological-critical approach.

1. The first of these directions is supposed, according to Max Horkheimer’s proposal (1931) to be (a) materialistic and (b) interdisciplinary and (c) use a variety of different techniques. It should (d) contain a dialectic relationship from empiricism and social philosophical theory, instead of a polemical differentiation from positivism and (e) devote itself to the investigation of the ‘great questions’, such as the relationship between the economy, the individual and culture. Social philosophy or, as it later become

¹ (1993). See also Markard (1991). He criticises my methodology under subject-related aspect as being defined only formally and not as content defined. Content-related definition requires relevance criteria. These are viewed as a problematic precondition in qualitative-heuristic methods and may prove to limit findings, where they are not varied during the research process. The critical potential of discovery processes lies in transcending the respective modes of appearance considered as relevant by formal processes, not in the confrontation of one defined fact with another. Content-related structures are the result of the heuristic process, not its prerequisite.
known, critical theory stands in ‘concrete historical contexts’ (Horkheimer, 1937). The materialistic claim was supposed to be redeemed by Erich Fromm’s ‘Psychoanalytical Characterology’ (1932). It was within this context that the two great studies ‘Authority and Family’ (Autorität und Familie) and ‘Authoritarian Personality’ were carried out (Institut für Sozialforschung, 1936; Fromm, 1980; Adorno et al. 1950)

2. The ideological-critical direction developed itself with the same intentions, but with a stronger emphasis on the historical element. The philosophy of science, literature and music were its main subjects. In particular, attention should be paid to studies conducted by Herbert Marcuse (1936; 1937), Theodor W. Adorno (1938), Leo Löwenthal (1936; 1937), Leo Löwenthal and Norbert Guterman (1949), Paul W. Massing (1959), Max Horkheimer and Theodor W. Adorno (1947). The methodological guidelines were summarised again at a later stage by Horkheimer (1941).

Roughly speaking, one can say that the sociocritical direction of research failed, whereas this was not the case with the ideological-critical approach, in spite of the aporia of critical theory and the disbanding of the ‘Institut für Sozialforschung’ at the start of the 1940’s. The enquête taken over by Fromm contains numerous examples of dilettantism. In contrast, the American survey was brilliant in its development of scales. However, neither of them brought any sociocritical positions to light – this cannot be simply explained by the deficits in the Fromm survey. It is more due to that fact that both studies are subject to a positivist narrowing of the fields of research and the data analysis of the surveys, that the social critical was not, or at least only barely, recognisable. In the course of the earlier study interviewees were categorised using ‘interpretative classification’ into three personality types, based on their answers to closed and ‘why-questions’, according to the researcher’s impression. The three categories used were ‘authoritarian’, ‘radical’ (revolutionary) and ‘ambivalent’. In later studies, those interviewed were further classified as ‘high scorers’ and ‘low scorers’. They were then characterised psychologically by means of in-depth interviews and projective tests (T.A.T.). The surveys showed that there were authoritarian and less authoritarian persons in Germany and in the United States and that the authoritarians had stronger, ethnic, racist and religious prejudices. The origins of these prejudices, which should be seen as the foundations for anti-Semitism and fascism, were therefore to be found in personality types. This suggests the assumption that social facts themselves, i.e. fascism, anti-Semitism and extermination of the Jews were a result of certain personality constellations – hardly a sociocritical conclusion, even if one were to see authoritarianism as a product of the authoritarian family.
In contrast, the ideology-critical works of the Institutes’ employees stand out due to the researchers’ wide field of vision and, in particular, the incorporation of historical processes in the analyses. For example, the ideological criticism of the ‘dialectic of the enlightenment’ spans from Homer up to the modern culture industry. Nearly all the afore-mentioned critical contributions are historical. One might reproach them for not making it clear how they came about their results, for being ‘social philosophy’ and not empirical research. But one cannot reproach them for not being critical.

The critical concept of the ‘successful’ examples of critical social research or social philosophy differentiate themselves from the critical concept of the ‘unsuccessful’ examples in that (1) it applies to society as a whole and (2) it considers historical processes regarding the object under deliberation or research, whereas the counter-examples refer to types or individuals, without any or at least insufficient consideration of their historical situation. Relevance to society as a whole and society examined within its concrete historical contexts, offer the critical concept of earlier critical theory the chance to become immanent and in this sense ‘objective’.

VII. Outline for a critical social research as heuristics

The move from subjective, position-related, exogenous criticism to intersubjective, situation-related and then socially immanent ‘objective’ criticism is a transition from measuring to interpretative to critical social research. However, if this is identical with a social research related to reality, then the shift can also be expressed as a transition from an objectified and reified conception of reality to an interactionist and then to a reality that is seen both as historical and societal as a whole. Comprehending this reality, using suitable methods is the responsibility of a science of reality (Wirklichkeitswissenschaft), which should also be a critical science to the extent that it deals with reality as a whole, complex and moving entity.

This would mean that the methodological aim of critical social research is no longer primarily measuring, neither interpreting nor critique but the research itself. Its related disciplines are neither measurement theory and statistics, nor hermeneutics, but heuristics.

The natural sciences serve as an example (once again) in this respect as it was their capability for discovery that first brought about their dominance. Science’s core methods: observation and experiment are also the core methods used by the social sciences, as they are the core methods of practical life in the
everyday world (alltagsweltliche Lebenspraxis). However, the social sciences have shown that they require not a narrow scientific concept of observation and experimentation, but a wider concept, as in everyday life (Kleining, 1984). Discovery strategies may also be taken from the natural sciences (Mach, 1905; Einstein & Infeld, 1987).

Above all though, comprehensive impulses for heuristic strategies are to be found in everyday practice. This is the great reservoir for the development of explorative methods for the social sciences.

Critical social research as heuristics must further the work of previous approaches to social scientific research: measuring social research and, in particular, interpretative research can be applied heuristically, as its methodologies to a certain extent already contain an explorative, ‘discovering’ aspect, which could be extended, in order to transcend the mere recording of appearance and meaning (‘Discovery’ Glaser & Strauss, 1967; ‘Openess’ Hoffmann-Riem, 1980, ‘Dialogue Concept’ Kleining, 1982).

VIII. Society as reified and moving

In measuring social research society appears as fragmented: research tools divide the social into a collection of different distributions of characteristics on scales. If the distributions are brought together mathematically, any association is exogenous to the data: a statistical relationship, whose plausibility still remains to be tested. ‘Movement’ can only be reconstructed by repeating the research as changing snapshots (Augenblicksbilder); the ‘longitudinal section’ is a result of the repetition of ‘cross sections’. This type of research is based on the notion of the smallest unit, which can then be determined in its sampled population with statistically defined precision, for instance in individual cases unambiguously as binominal, i.e. existent or non-existent. The whole is a sum of the parts. The individual units are causally or correlatively connected to one another. This conception has its origins in the mechanistic world view (Weltbild) of the natural sciences dominant between the 16th and 18th centuries, which gave rise, among other things, to classical mechanics, which as we know introduced revolutionary reforms in comparison to the ancient Greek and scholastic understanding of nature. The mechanical sciences had their equivalent in the philosophical ideas of René Descartes, Gottfried Wilhelm Leibniz and rationalism. Later physics completely abandoned mechanics (Einstein & Infeld, 1987; von Weizsäcker, 1987).

In interactionist social research the social world appears as moving. As it
reconstructs meaning produced by interacting participants and interactions, it also detects and registers changes. These remain restricted to the participants and their modes of interaction and also indicate changes in the individual concrete social field, but not in the macro-social area, in as far as meaning cannot be applied to it. For example, this approach does not include economic dynamics.

The ‘critical’ social research of the early Frankfurt School attempted to establish connections concerning society as a whole, for example, between economy and authoritarianism with the family as a socialising medium. Immanent social movements could be demonstrated, in particular, through the historical study of the development of ideas and ideologies, by examining the rise and fall of the individual in modernity. Society as a whole can be seen here to be moving.

Social research as heuristics must recognise both factors: the sociality which is the ever continuing product of each individual social activity and of the liveliness and dynamism of human beings in each generation and the solidified, heteronomous stability of an institutionalised and ‘inhospitable’ social world, which both originate from the same source, i.e. the combination of movement and immobility, spontaneity and reification in its historical development and justification. Immanent criticism provides the means to restore a consciousness from the contradictions, which are at the same time the result of and impetus for social change: the social world as moving and also rigid, i.e. with its contradictions.

Heuristic social research is therefore able to criticise ‘critical’ research, just as critical research criticises interpretative research and this in turn criticises measuring social research. This is because heuristics has a more comprehensive concept of reality (Wirklichkeitsbegriff) than critical research and because its concept of criticism is immanent and not exogenous to the criticised relationship.

The researcher adopts different positions in relation to his subject in the different types of research. In measuring social research, his position is opposite the subject of research, which he defines using standards of his own designation, he is the expert. In interactionist social research the life world unity of the researcher and his subject are imputed and in critical social research the self-and subject-critical, i.e. the reflective researcher, is required. Heuristic social research has a dialectic subject-object-relationship, which was already conceived by the authors of critical theory, who maintained dialectics as the research method until after the middle of the 20th century (in particular Adorno and Marcuse). The researcher is a part of the object of his research and at the
same time separate to it, he defines it, but is in turn defined by it. This tension results in knowledge. The dynamic or dialectic unit of socialised subject and social object forms the basis for the critique of all research methods that assume a subject-object boundary or separation.

IX. Critique as practice: the real in false movement

Different types of research produce different types of appearances of the world and also different positions of the researcher in relation to it, as described previously. This relationship can also be understood the other way round: different world conditions (Weltzustännde) give rise to different types of research. Therefore, criticism of research methods is transferable to a criticism of world conditions.

One of the most important features of previous social relationships is their structure, or, what is essentially the same thing, transformation of this structure. The study of everyday experiences shows a wide range of parts and groupings and also of movements: quick and slow, one-off and periodically reoccurring, unidirectional and opposing, continuous and finite, linear and circular, anorganic, organic and dialectic. It shows immanent and exogenous movements in numerous expressions and gradations. All scientific efforts that endeavour to master this variety have to take simplification into account, although they are affected to different extents by fragmentation and reification.

Stochastic models are best suited to a solidified world. Liveliness crystallises here into mathematical relationships from individuals, movement to probabilities. Changes over time expressed linearly or by mathematical curves – for example, the ‘ideology of progress’ (Fortschrittsideologie) – generally cover subsections of social life, for example, data based on economics, population or other factors, that can be expressed periodically. Here, data can only be classed by adhering to classification standards, as changed, if it shows significant variation on a plausible level. However, only in so far as it can be assumed that the samples come from the same main body of research. For example, curricula vitae or cultural developments are described using cyclical and circular processes. They generally encompass larger areas than linear representation; they are no longer just sub-aspects and lead movements back to beginnings. Characteristics develop out of one another and change in the course of development. Dialectical processes portray reality through wider scopes and differentiated vitality. While cyclical models of previous conditions are incorporated into newer models, contradictions remain intact in the dialectical
representation. Life is portrayed as moving and contradictory, as creating fissures and fractures, as conclusive and ambiguous all at the same time; as transforming and being transformed. The dialectic is an expression of such a condition of the world (Weltzustand). The subjective assurance that there are dialectical processes is based on the experience of one’s own emotional world (Gefühlswelt), one’s own will (Wille) and one’s own cognition (Denken) as well as the social world: the production of social effects and being affected by them, which can also be contradictory, as well as being able to develop and transform.

If this is the case, then natural movement and natural structures provide a basis for the criticism of the reified, fragmented, dualistic, mechanistic and ‘false’ structures. ‘Natural’ aspects in their entirety can only be inferred from a criticism of the reified world, they only appear ‘naturally’ as a detail. Criticism as a criticism of the research process transforms itself into criticism of the social world. How and under what conditions this can be implemented in practice remains to be seen.

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