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Retrieving and recontextualising VET theory

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Vocational training theory footprints in times of climate change – aspects of a critical ecological position

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Abstract

There has been no discourse on vocational education theory for a long time. This is surprising, since our society is facing profound changes in times of climate change, which will have a lasting impact on the world of work and thus also on vocational education and training. During such social upheavals, it has always been the task of *educational theories* to equip pedagogical action with new values, at the centre of which, however, remains the idea of humanity.

This paper argues for a revival of VET theory, the occasion of which is climate change. The focus is first on the fractured history of the theory of vocational education and training, which already came to an end at the end of the 1970s. The fact that this also calls into question the significance of VET theory as a whole is then critically questioned. A serious problem, however, is the lack of a portfolio of vocational education theory, which is why the searching view is dependent on finding connections in one's own history or in general education before a new approach to a current vocational education concept can succeed. The first and still preliminary lines of a critical-ecological position shown here now interweave the moral-theoretical figure of compassion with aspects of recognition theory in order to plead for a new enlightenment on this basis, the scope of which exceeds the hitherto predominant projection surfaces of vocational education.

Keywords: *Vocational training, sustainability, vocational training theory, ecology, ethics*

1 In times of climate change

Climate change marks the end of man's phase as a shaper of his own future. A scenario that is not completely absurd, if one follows the statements of climate research. Just looking at the glaciers melting, whose decline man is already trying to stop by means of foil coverings, makes the whole extent of helplessness clear. The professional working world is not unaffected by this development. It, too, is challenged to face up to the *social transformation* and to adopt new perspectives (cf. UN 2021, 3; BMWK 2022, 8).¹ There will probably be no other choice, as the results of the Intergovernmental Panel on Climate Change speak for themselves.²

¹ All the following quotations are translations from the original German sources.

² The current climate report of the Intergovernmental Panel on Climate Change (IPCC) indicates that "approximately 3.3 to 3.6 billion people [...] live in conditions that are highly vulnerable to climate change" (IPCC 2022, 1f.).

All in all, the statements of climate research have been speaking a clear language for decades and are frightening at the same time, pointing out that even today the global warming target of 1.5°C by 2030 is no longer feasible. If no fundamental changes are made, global warming of about 3.2°C can be expected by 2100 (cf. IPCC 2022, 4). The expected consequences concern, for example, crop failures due to increasing droughts (cf. Thober et. al 2018; BLE 2017), increasing floods with armed conflicts over raw materials, and a growing movement of refugees (cf. Nicholls et. al 2020). In Germany, the increasing heat waves also have a negative impact on working conditions in non-air-conditioned office buildings - effects that have so far hardly been recorded in health assessments (cf. UBA 2019, 30f.). The World Economic Forum (WEF) also draws a sober balance in its 18th report on global risks. According to this report, climate change can only be mitigated through joint global efforts, although there can be no talk of being prepared (cf. WEF 2023, 8). On the other hand, the complaint filed in 2021 before the Federal Constitutional Court, according to which the postponement of high emission loads to periods after 2030 was classified as unconstitutional, was an exclamation mark.³ However, the overall legal situation is difficult, as the federal states have sole responsibility (cf. Epiney 2007), and lawsuits based on human rights are hardly effective.⁴

Apart from this, the topic of climate change is gradually making it onto the political agenda. For example, vocational training policy has adopted the aspect of *environmental protection and sustainability* as one of four new standard occupational profile positions whose integration into the training regulations of all recognised training occupations is binding as a minimum requirement as of 1 August 2021 (cf. BIBB 2022). However, it is questionable whether this will lead to changes in the near future, since the existing training regulations are not affected by this. And so it remains in the opinion of the teachers to fulfil the educational mandate of the vocational school, which has long called for "shaping the world of work and society in social, economic and ecological responsibility" (KMK 2021, 14).

However, progress cannot be completely dismissed out of hand, as pilot projects on 'Vocational Education and Training for Sustainable Development' have been promoted since the beginning of the 2000s (cf. BIBB 2023). Numerous curricular proposals, practical learning materials, aspects for the redesign of learning fields, etc. can be found here. Nevertheless, it has not yet been possible to bring about a visible change in vocational education and training practice (cf. Kuhlmeier/Weber 2021, 434). There is a lack of integration into the structures of educational practice as well as a fundamental discourse on the effects of a changing world of work.

2 Initial conditions for a theory of vocational education and training

In the face of climate change, enormous transformations are taking place that should actually be characterised by a sustained *self-enlightenment* and *reassurance vis-à-vis the* principles that are still valid (cf. Klafki 2007, 16). This is because the expected changes are accompanied by

³ Federal Constitutional Court: Press release no. 31/2021 of 29 April 2021.

⁴ Human rights violations can only be negotiated *after* an interference with a right and not preventively (cf. UBA 2010, 33; Menke/Pollmann 2007, 109).

profound structural changes in many areas of work, concerning, for example, the exit from the coal economy, the entry into electromobility, the use of sustainable raw materials in the construction industry, and so on. Such a profound change poses enormous challenges for vocational education and training, because it is not merely a fine-tuning of traditional work and business processes, but a realignment of fundamental professional understandings. Therefore, it is not only about the question of competence development, but also about the underlying idea of legitimisation and fundamental sense-making. And this is precisely the task of vocational education and training theory or of a basic discourse on vocational education and training theory, to which this article would like to contribute. First, however, it must be clarified where the difficulties of such a concern actually lie. This concerns above all the lack of a current basic discourse, the causes of which are found in the fact that the significance of VET theory is dismissed in many places with a kind of historical *closedness* (chapter 2.1). This is countered with the argument of contemporary historical *transitions* (chapter 2.2), which have a considerable influence on the interest in (vocational) education theory questions. And yet it is admitted that connections to a vocational education concept that needs to be reformulated will have to be oriented in particular to the general education discourse (Chapter 2.3), since numerous educational figures can be found here that have largely been lost to vocational and business education.

2.1 Completeness

The search for connections to vocational education theory inevitably leads to history. Here we find the missing fund of publications whose contemporary historical framework initially falls on the so-called 'classics', such as Georg Kerschensteiner, Eduard Spranger, Aloys Fischer or Theodor Litt. Their achievements are comprehensively acknowledged in the specialist literature, but always with reference to a chapter closed in contemporary history. Thus, it is possible to speak of a narrative that the *historical* task of the classics was to raise the profession to the podium of human education in order to reconcile vocational education with the educational ideas of Wilhelm von Humboldt (cf. Arnold/Gonon/Müller 2016, 166ff.). Furthermore, it is acknowledged that the writings on vocational education theory laid the intellectual foundation for a path that led "around 1930 to the establishment of a new discipline in higher education" (Zabeck 2013, 515). But this also closes the chapter on "the opposition between general and vocational education" (Herkner 2015, 191). Everything else lies outside the scope of vocational education theory, since its protagonists "apparently had little [...] to say" in the face of the modernisations that were now emerging in contemporary history (Arnold/Gonon/Müller 2016, 168). This cut, however, blurs the levels between the historical and epistemological perspectives. For without a doubt, the achievements of the classics can be marked from a historical perspective as pioneers of the vocational school and also of vocational and business education, but to abandon/ignore their writings with this at the same time is incomprehensible. After all, we are not dealing with selective, time-bound questions, but with fundamental insights into vocational *education and training*.

The loss of vocational and business education personalities is also disconcerting, or who still knows Anna Siemsen, Olga Essig, Karl-Heinz Geißler or the protagonists of the 'League of Decisive School Reformers', such as Paul Oestreich - a mistake that can hardly be made up for in the successive dismantling of research into the history of vocational education (cf. Stomprowski/Kipp 2003; Friese 2019).⁵ The argumentative reductionism is also conspicuous, especially in relation to complex figures in vocational education theory, which are then narrowed down to a few, but powerful catchwords. Even larger publications, such as Jürgen Zabeck's on the 'History of Vocational Education', are caught up in argumentative thinnings, for example when Theodor Litt's historical achievement is seen in having "shown that romanticising reminiscences of vocational education theory are no good for determining the tasks of pedagogically responsible vocational education in the 20th century" (Zabeck 2013, 512). More and more, it is only fragmentary key words by means of which the comprehensive works of vocational education theory history are identified - brief cuttings that are "at the expense of their truth content and their living relationship to living subjects" (Adorno 1959, 176). Such an idea is underlined when even prominent voices treat the argumentation of vocational education theory within the framework of a historical culture of memory (cf. e.g. Kaiser/Götzl 2020). Equally confusing is the repeated reference to Wolfgang Lempert and the advocacy of a *critical-emancipative theory of vocational education and training*, the line of thought of which, however, follows a strangely anachronistic recollection (cf. Büchter 2019, 15f.). What remains is the irritating impression of a *historical closedness* that is imposed on vocational education theory as a whole.

2.2 Transitions

The impression of closedness should now be countered by the fact that questions of education cannot be excluded from the pedagogical discourse. Although it is possible to speak of a certain lack of interest in the thematisation or even the development of theory-related educational concepts, answers to the question of the individual design of professional normative references can also be found in qualification-related action plans. For educational processes always contain notions of the "idea of being human", even if these dwell in the notion of occupationally qualifying opportunities for participation (cf. Frischmann 2012, 160). It is therefore less a question of legitimisation and more a question of giving voice to the idea – a process that traditionally gains weight especially in times of social upheaval. Thus, historical waves of educational theory concept development can always be discerned, the extent of which was tied to the particular historical situation. This is not surprising, since it is about processes of understanding and shaping in the face of social transformation processes. For this reason, educational concepts "cannot easily be transferred to another historical horizon" (Peukert 2015, 44), which is why the concept of (vocational) education and training, as a recurring task, becomes a matter for each generation to ascertain its particular contemporary historical

⁵ At this point, we must agree with Deißinger, who describes historical-comparative vocational and business education as "a branch of research for which there are only a few lines of tradition" (Deißinger 2022, 97). It should be added that hardly any monographs on historical personalities are still being written, such as the one by Erich E. Geissler on the life and work of Theodor Litt (Geissler 2011).

situation - a task that the editors of this bwp@ special issue are indeed self-confident in setting themselves. In order to emphatically draw attention to the importance of reviving the discourse on vocational education and training theory, it will be shown in brief historical forays that the (vocational) education and training debate gained in importance above all in times of social upheaval and that its figuration was correspondingly charged in different ways.

Wilhelm von Humboldt in the Transition to Liberalism

The time which Wilhelm von Humboldt wrote his fragments on educational theory falls in the era of flourishing liberalism. As a 'traveller' and in charge of various political offices, he virtually inhaled the various political aspirations for freedom as well as the burgeoning cultural diversity, which he incorporated into his writings on educational theory. Humboldt focused on the individual personality of every human being and the development of his or her powers based on this personality. This is the birth of the middle classes, a completely new social stratum, which is described by Goethe, Schiller and other writers. Humboldt, who describes the transition to liberalism from the perspective of educational theory, also finds himself in this society. Accordingly, he finds clear words when he criticises the *interference of the state*, which "inhibits the free play of forces" (Humboldt 1792a, 85f.). These forces are those of the individual human being, which Humboldt turns to educational theory and which he tries to free from any interference. This then includes Immanuel Kant's doctrine of principles, since here, according to Humboldt, the question of morality has no connection whatsoever with man's ability to develop. Inspired by the many-sided cultural changes, Humboldt concludes that, as he repeatedly emphasises, it is this *diversity* that makes man "richer, livelier, more powerful, more fruitful" (a simultaneously clear criticism of the existing political conditions; Humboldt 1795, 85; cf. also: Gall 2011). Thus, everything that keeps people in externally determined dependence is not *educational*, such as the banal "needs of life" or the vocational training of the purpose-bound world of work (Humboldt 1809, 134). What remains is an educational ideal that neither sacrifices the particular to the general, nor surrenders individuality to the purpose rationalism of everyday reality, but "conversely, brings the general to perfection in the particular" (Casale 2022, 132). Put simply, it is about the appropriation of the liberalist lift of *freedom*, through which the living force in man becomes ignitable and in which the authoritarian state simultaneously loses influence. For among free people, "all trades progress better [and] all arts flourish more beautifully" (Humboldt 1792b, 103; also: Humboldt 1792a, 78). Humboldt gave the concept of education its first firm contours, the guardrail of which was laid in the concept of freedom. For "freedom is the necessary condition without which even the most soulful business cannot produce any beneficial effects of this kind. That which is not chosen by man himself, in which he is also only restricted and guided, does not pass into his being [...] that he does not actually perform with human strength, but with mechanical skill" (Humboldt 1852, 22). It is this movement towards freedom that emerges politically in the *transition to liberalism* around 1800 and that has a lasting impact on Humboldt's concept of education. The focus is on the *free* human being, who is now called upon to shape his or her own personality. This movement of self-determination, however, contradicts the purpose rationalism of the mere

world of work, which is why any form of vocational education is denied access to the temple of education.⁶

Georg Kerschensteiner in the transition to nationalism

Georg Kerschensteiner is one of the founding fathers of vocational education theory.⁷ His work and creativity took place in the age of transition from liberalism to emerging nationalism. In addition, there were tendencies towards the dissolution of liberal fundamental convictions in the new nation state as well as an "epoch of profound and therefore painful changes felt by millions, [which] created optimal conditions for the advance of ideologies" (Winkel 2008, 1066). Described by Eduard Spranger as the last great liberal-democrat of "southern German colouring" (Spranger 1972, 409), Kerschensteiner interweaves his goal of the *morally free personality* with aspects of practical vocational work - a clear *criticism of Wilhelm von Humboldt*. Although he adopts Humboldt's aspects of individuality and totality, he does not expand them in the direction of universality, but rather marks sociality (cf. Kerschensteiner 1928, 40f; 89) and activity (cf. Kerschensteiner 1933, 41f.). This decisive break with Humboldt now places acting practice and above all the profession in a completely different perspective. For everything of value, all "the large number of ideas that merely fly in from the outside, if they do not find a deeper feeling left behind from practical experience, with which they can merge, [...] do not have the slightest formative power for our being" (Kerschensteiner 1904, 96). And so *vocational education stands at the gateway to human education*, which is why "true education [...] bears fruit on the soil of work" (Kerschensteiner 1904, 103). Kerschensteiner puts it very vividly when he writes with regard to learning success: "The thirteen-year-old children's heads, beautifully patinated with knowledge substances, appeared like brightly polished hollow copper kettles when they were revised at the end of the sixteenth year. The patina was a fake one, and three years of the wind and weather of practical life were enough to destroy it" (Kerschensteiner 1954, 42f.). Kerschensteiner's view of the value of educational practice now leads over to *civic education*, because in this way the educational work that becomes a moral personality "sends out its ripples into the community" (Kerschensteiner 1928, 27). What is meant is a *moral consciousness which*, precisely because of its practical relevance, sees itself called upon to "moralise the community" and does not mean "merely the education of the individual" (Kerschensteiner 2028, 215). In a certain sense, Kerschensteiner formulates his thought on *civic education* as a clear critique of Humboldt's idea of human education, since the latter separates out the *needs of life* as non-educational and emphasises only the process of self-formation (cf.

⁶ It must be added here, however, that Humboldt is writing about the state of labour relations at the end of the 18th century. For basically, according to Humboldt, "every occupation is capable of ennobling man, of giving him a certain shape worthy of him. It is only the way in which it is pursued that matters" (Humboldt 1852, 22). It is certainly a very distorted view when Humboldt speaks of the cultivation of the intellectual powers of peasants and craftsmen, who would thus also come to ennoble their personalities through their activities. However, this figure is not, as is often claimed, a fundamental, i.e. blanket denial of the educational possibilities of professional activity.

⁷ The fact that only Kerschensteiner is referred to here is due to his importance for the formulation of the first approaches to vocational education and training theory. Eduard Spranger, Aloys Fischer and others should certainly be mentioned here on a larger scale.

Humboldt 1809, 134). In contrast, Kerschensteiner, in a certainly provocative counter to Humboldt, emphasises the "useful citizen" when he writes: "On the other hand, even the work of a street sweeper can take on moral value if it is carried out in the awareness of the necessity of this work for the whole" (Kerschensteiner 1955, 13).

In the *transition to nationalism*, Kerschensteiner clearly opposes a "nationalistic attitude" and counters this with the "idea of justice" in the state (Kerschensteiner 1910/1966, 45). It is ultimately thanks to him that there is a clear shift towards a fundamental understanding of *vocational* education. In doing so, he moved away from the legacy of Humboldt, whose ideals Kerschensteiner did not completely abandon. Rather, it is an elevation of vocational work to the podium of the general educational ideal, which also contains open references to an understanding of democratisation. However, the group of *semi-skilled* and *unskilled workers* is also left out.⁸

Theodor Litt, Wolfgang Blankertz, Wolfgang Lempert and the Transitions to Democracy

At the vocational education conference in Halle in 1946, Theodor Litt very vividly formulated the task facing education as a whole in the aftermath of Auschwitz:

"We do not have an education that we can transfer to young starving people, but are thrown back to the zero point from which education must be sought, even by us old people. [...] We have to state: German education has *not* proved to be a life-protecting power in the last years of crisis" (Litt 1947, 12).

It is now becoming the task of the "second" generation⁹ to break new ground and give vocational education theory a more political orientation. Examples of this are the works of Wolfgang Lempert, Herwig Blankertz, Karl Heinz Geißler, Anna Siemsen, Gisela Stütz, but also Theodor Litt and others, whose common denominator is the "realisation of democratic rights of freedom and equality" (Lempert 1974, 8). The discourse of educational science could not avoid inserting political lines of demarcation into the pedagogical in order to be able to meet Adorno's demand of pedagogy "that Auschwitz not be repeated" (Adorno 1966, 88). Criticism of the classics was not infrequently scathing, whereas the turn to the question of democracy, which now became visible, was comparatively harmonious (e.g. Lempert 1974; Litt 1958a; Spranger 1958).¹⁰ Even Georg Kerschensteiner was criticised, whose idea of the working school Theodor Litt criticised as inadequate in its basic pedagogical conception, especially since it in fact excluded the problems of industrialised society in favour of a concept of culture detached from it (cf. Litt 1959a, 71f.). From an ideology-critical perspective, on the other hand, Gisela Stütz evaluates the idea of civic education as *duping* its pupils, since the focus is not on enlightenment

⁸ For Kerschensteiner, "unskilled work is not a profession for which a person can be inwardly called" (Kerschensteiner 1929, 39; cf. also Stomporowski 2009).

⁹ The division into a first and second generation is blurred, especially in relation to people like Theodor Litt and Eduard Spranger, whose creative period after 1945 still produced considerable publications. Differences arise primarily in the scientific-theoretical perspective, since the "old forerunners" mostly argue on the basis of philosophical-anthropological or cultural-theoretical presuppositions.

¹⁰ This should not obscure the fact that on closer reading there are differences in the understanding of democracy, even if the core democratic idea remains unaffected.

and human self-determination, but on the adapted human being (cf. Stütz 1970, 41). All in all, the criticism after 1945 was quite clear, not only of Kerschensteiner, but of the ancients in general.

The concepts of *ideology critique* and *emancipation* now move to the centre, whereas the idea of humanity remains the link in educational theory.¹¹ The political interest in the development of democracy remains in the centre and is introduced into the vocational and business education discourse mainly by Herwig Blankertz (1969b, 153) and Wolfgang Lempert (1974, 24), but also as a self-critical discourse movement in the context of communicative competences by Karlheinz Geißler (1974, 86). The education-related apostrophies, however, are quite different, which can be traced especially in Theodor Litt. For unlike his contemporaries, he is concerned in a traditionally anthropological perspective with forms of *self-contemplation*, whose critical reflection figure is "not to the attacking intentions of an opponent approaching from the outside", but is indebted to one's own fallibility (cf. Litt 1958b, 146). In Theodor Litt's work, philosophical, pedagogical and also political thoughts intertwine, in whose synopsis he does not spell out an outwardly directed concept of critique, but rather draws attention to one's own self-endangerment and a related call for inwardly directed *vigilance* (cf. Litt 1959a, 146).¹² Wolfgang Lempert, on the other hand, has a more interdisciplinary orientation when he asks about the socialisation conditions of young trainees in various research projects. He is concerned with occupational democratisation processes, with the "company as a 'moral institution'", for the realisation of which Wolfgang Lempert draws, for example, on Lawrence Kohlberg's moral theory (Lempert 1980, 90).

In the 1960s, the disciplinary location expanded considerably. The dominant position of the often philosophical-cultural theoretical view now leads over to sociological, psychological, communication and socialisation theoretical perspectives. The "liberated subjectivity" moves into the centre of vocational *education* and training, whereby *maturity* and *emancipation* (as well as *mobility*, which is hardly considered today) rise to new strong conceptual figures (cf. Blankertz 1969a, 41).

* * *

The forays into history should now end here, especially since the (temporary) end of the comprehensive vocational education debate was already announced at the beginning of the 1970s with the growing interdisciplinary interweaving of perspectives. Criticism now focuses on the increasing detachment from the actual qualification-related task field, which is why the

¹¹ The concept of *humanity* would have to be clarified separately, because it often remains unsoken in numerous writings on education theory.

¹² The concept of *vigilance* would have to be elaborated more clearly elsewhere, since it stands in a philosophical antagonism that Litt himself runs through. Thus his understanding of inner vigilance culminates in a far-reaching biographical examination of Hegel and his concept of reflection. Only late, with his book *Hegel - Versuch einer kritischen Erneuerung (Hegel - Attempt at a Critical Renewal)*, published in 1953, does Litt leave the human being in a position of limbo and show that it remains a constant struggle, "with opposites always breaking out anew", in which the self stands and with the experience of which it becomes possible to also "shape the world" (cf. Litt 1959a, 130; Litt 1953, 302f.).

functionality of the vocational system is brought back into the vocational and business education task field in the focus of an initially system-theoretical approach.¹³ *Vocational qualification* takes the place of *educational moments that are* critical of society, since, in Jürgen Zabeck's view, the actual meaning of vocational and business education lies in the *integration of people* into society organised on the basis of the division of labour. Ultimately, vocational qualification was in the foreground, which is why a person should be trained "in such a way that his or her ability to function during his or her prospective occupation is preserved!" (Zabeck 1975, 231, 233). It is the view into the interior of the qualification-related task in which a comprehensive vocational training theoretical argumentation background is not considered necessary (cf. Zabeck 2013, 698f; Arnold et. al 2016, 178f.).¹⁴ It is therefore not surprising that curricular and didactic perspectives now dominate the vocational and business education debate.¹⁵ The conclusion of vocational education discourses is somewhat unusually justified by Jürgen Zabeck as follows: "As early as the 1970s, it became clear that *Blankertz's* theoretical ideas on vocational education would not be able to gain any practical significance in vocational education, given the relatively stable social and economic conditions in which real-life supply activities were embedded" (Zabeck 2013, 722).¹⁶ In the 1980s, the discourse on vocational education theory disappears almost completely. Larger publications, such as Christian Mayer's on vocational education theory in the lines of Wilhelms, Pestalozzi and Weinstock, are mostly historical-reconstructive in nature and remain the exception (cf. Mayer 2000). This weakness is criticised but not corrected (e.g. Ott 1997, 33; Kutscha 2009; Unger 2014, Ketschau 2018, 86; Pukas 2020). Thus, it is not surprising when Franz Kaiser and Thilo J. Ketschau come to the conclusion that "the search for meaning and contribution that vocational action holds for social prosperity no longer seems to be part of vocational education" (Kaiser/Ketschau 2019, 15)¹⁷. The *work-oriented turn* that began in the 1980s is responsible, as a result of which

¹³ Jürgen Zabeck should be mentioned here, but also Herrmann Lange, who accuses Wolfgang Lempert of "conceptual inconsistencies" in his critical-emancipatory theory of education (Lange 1975, 323).

¹⁴ In the basic works on vocational pedagogy of the 1970s, the turning away from questions of vocational *education* can be well understood. Friedrich Schlieper, for example, dedicates a subchapter to the concept of education in his 'Allgemeine Berufspädagogik' (General Vocational Pedagogy), which he describes on 23 pages, following Humboldt but also Spranger, between vocational and educational attributions as the "perfection of the *whole person as a goal*" (Schlieper 1963, 62-84). In contrast, twelve years later Antonius Lipsmeier, Helmut Nölker and Eberhard Schonenfeldt completely exclude questions of vocational *education* in their "Berufspädagogik" (Lipsmeier/Nölker/Schonenfeldt 1975; cf. also Arnold/Gonon/Müller 2016, 178).

¹⁵ Fundamental criticism of VET theory is also growing, for example, when Wolfgang Schönharting, in his critique of VET theory, complains of an inadmissible "holding between the world of work and the individual" (Schönharting 1979, 151). On the other hand, vocational education theory is certainly carried forward in vocational subject didactics, such as in work-oriented exemplarics (cf. Lisop/Husinga 2004). However, it is also noticeable that in many respects the depth of the argumentation figures is gradually disappearing, which can be traced, for example, in the understanding of professional action competences. While Heinrich Roth still differentiates his claim of *moral capacity to act* through anthropological trains of thought, his concepts of self-competence, professional competence and social competence, which are still used today, are outlined primarily through external descriptions of characteristics (cf. Roth 1976, 388ff.).

¹⁶ There is certainly a lot that could be added to this, as Jürgen Zabeck shortens the intellectual work of Herwig Blankertz to real economic conditions. However, it remains questionable whether this view also includes the underlying power structures that Blankertz raises as a topic (cf. e.g. Blankertz 1969b, 153).

¹⁷ This reproach may well be justified, but it excludes existing subject-didactic references. Even if Ulrike Greb in her study on the *self-image of the discipline of vocational and business education* comes to the conclusion that "as an identity-forming category of vocational and business education, education ultimately remains

vocational science attention is increasingly shifting towards "decoding the knowledge and skills incorporated in practical vocational work" (Rauner 2004, 279). Although much good can be gained from this development, since it leads to the centre of vocational work, the first more extensive learning field debate is hardly followed by more in-depth fundamental discourses (cf. Becker/Spöttl 2021, 7; Kaiser/Ketschau 2019, 13).¹⁸ What remains is the *undefined* path into a new era, in which first globalisation and then the noticeable changes in the worldwide climate herald a historical caesura.

2.3 Connections

In the search for connections to vocational education theory, there is no avoiding the need to resort to publications in the field of general education. This is because, in contrast to vocational and business education, there is a broad, almost confusing discourse here. However, despite or precisely because of the good source situation, there is above all disagreement in the field of *education*. Although the idea of humanity can be identified as the *inner core*, it is followed by different ideas of interpretation (cf. Wulf 1984, 65).¹⁹ This also applies to the core concepts of *maturity* (see e.g. Rieger-Ladich 2002; Dammer/Wortmann 2014), *critique* (see e.g. Jaeggi/Wesche 2021) and *emancipation* (see e.g. Dietrich/Müller 2000). Thus, although the cornucopia of discourse on education theory is richly filled, it is overall a polyphonic mishmash, which leads Heinz-Elmar Tenroth to conclude that "the talk of education presents itself as a disorganised rather than clearly structured variety of topics and arguments" (Tenroth 2020, 507). Whatever one's assessment of this field, entering this *polyphonic mishmash* in any case carries the danger of losing sight of the numerous epistemological threads. In this respect, it is a certain risk, because the search for clues in the labyrinth of educational theoretical figurations is not only *confusing*, but also a political issue. For it is always also "about the interpretive sovereignty of a discourse that transcends disciplines" (Rieger-Ladich 2019, 19). And so missteps often result in a disqualifying "smile of the guild" (Ricken 2006, 20).

Basically, the difficulty of a new approach to VET theory is, on the one hand, having to follow up on a *seemingly* closed chapter of VET theory and, on the other hand, to bring well-founded lines of development in VET theory out of the babble of voices in general education into the field of VET. In addition, there is the problem of the interpretative pleasure of the classics of educational theory. For example, there is already a multitude of explanations of the allegory of the cave, which makes its recourse to vocational education theory considerably unsettling (see e.g. Reichenbach 2007, 47; Döpinghaus et. al 201; Rieger-Ladich 2019). Or one keeps it with

amorphous in these writings", one can certainly find works in subject didactics with an educational theoretical impact (Greb 2009, 20).

¹⁸ While in the 1970s a close interlocking of empiricism and theory was still common for the systematic generation of knowledge, current attention has shifted mainly to the development of diagnostic test procedures (cf. Gonon 1997, 166; Seeber/Nickolaus 2010, 256).

¹⁹ The fact that humanity is still the guiding principle of educational theory must be examined in the light of recent publications on posthumanism elsewhere. For example, Stefan Herbrecher writes: "What seems to have broken down, however, is the social and cultural consensus: humanist ideals and values were always interpreted in a universalist way, but in fact the universal norm had a rather specific face (namely European-cosmopolitan, white, male, Enlightenment, etc.) (Herbrecher 2014, 270).

the *education sceptics*, whose lines of argumentation grotesquely often end up in education-theoretical turns themselves. What else does Norbert Ricken present in his "Ordnung der Bildung", whose *Bildung as a matrix of subjectivation* does not mark any alienation from the concept of education, but only brings to light another figuration of education theory (cf. Ricken 2006). Against this background, the discourse of vocational education theory faces many tasks. On the one hand, connections from the wide-ranging field of general education are both exciting and necessary, even if the diversity of discourse certainly has discouraging tendencies.²⁰ On the other hand, there is no way around the 'classics' of vocational education theory. For it is not only to their credit that they have raised the occupation to the podium of human formation, but also that fundamental questions have been clarified, the elaborations of which already contain valuable aspects on questions of anthropology, cultural theory and the like. This also applies to the post-war discourse on vocational education and training theory, which leads to new core concepts such as maturity, emancipation, critique - ideas that can now be introduced into the current climate debate.

3 Vocational training theory footprints

In brief, the first footprints of a critical-ecological theory of vocational education and training, which is currently being published, will be presented here. The special perspective applies to the climate-related changes that have a lasting impact on the professional world of work and thus also pose new challenges for teacher education. And these concern the didactic centre in which the vocational action competences with their typical work and business processes are located. From there, the further teaching-learning processes are founded and unfold, which then, supported by the company practice, deposit the professional identification (cf. Herkner/Pahl 2020, 200f; Euler 2020, 206). Educational projects that reject such a practice-based view are rejected by John Erpenbeck and Werner Sauter as "seminaristic, externally controlled teaching concepts" (Erpenbeck/Sauter 2020, 187). Dieter Euler counters this by asking whether the competences to be acquired in this way are worth striving for solely through close practical relevance. Therefore, an "understanding of education linked to competence orientation" is needed, especially since competences are open to values, "but at the same time require normative justification and definition" (Euler 2020, 210). Such a justification could now be found in the field of vocational education theory, whose historical mark-ups, however, seem unsuitable. Thus, Dieter Euler turns to general education, helplessly so to speak, by referring to the idea of education in Wolfgang Klafki.²¹ But as long as the projection areas of vocational education and training only encompass the radius of company work processes, questions about the significance of the competences to be acquired can only be answered within

²⁰ And yet it resembles an almost insurmountable effort when power-theoretical aspects (see e.g. Ricken 2006, 153f.), questions of alienation (see e.g. Jaeggi 2016) and aspects of discourse ethics (see e.g. Wellmer 1999) as well as many other discourse implications have to be found out.

²¹ However, no further explanations are added to the reference to Klafki. Although one can follow Euler's hint that "without corresponding value references" competence orientation exposes itself to the reproach of "instrumentally placing itself at the service of arbitrary interests", this merely apostrophises the dilemma of missing theory references (Euler 2020, 210).

these boundaries. Ecological behaviour in this context therefore only means adherence to company environmental protection measures, such as the proper handling of cleaning agents, laboratory chemicals, and the like. What remains completely unclear is how to deal with the environmental consequences of actions whose ecological inputs lie far outside the operational sphere of action. The transgression of operationally oriented work and business processes can therefore not be omitted, since it is about an expanded understanding of professional work that self-confidently opposes the advancing effects of climate change. And this will only succeed in a (self-)critical ecological perspective. In order to enter this into a vocational *education concept*, the following four levels of action of a responsible ethical position are addressed:

- The moral theoretical rationale: Compassion
- The recognition-theoretical demand: *The Other*
- The epistemological dimension: *The Enlightenment*
- The Reflection-Theoretical Appeal: *The Immanent Critique*

3.1 Compassion and empathy

Climate is the term used to describe the average state of the atmosphere, whose changes occur through a complex interaction of various ecological occurrences over a longer period of time, but then produce situations of high permanence, whose effects are felt in very extensive form as local weather phenomena (cf. UBA 2021). And these can cause considerable damage and devastation and lead to an enormous amount of human tragedy. The force of these natural disasters now affects every region of the world and costs many people their lives every year. Added to this is property damage, which Munich Re estimates at 280 billion dollars worldwide for the year 2022 (cf. MR 2023). However, it is not the case that climate change is an unknown phenomenon, the effects of which leave us stunned. Nor is it a lack of expertise whose lack of information keeps us immature. Rather, it is the phenomenon itself that, as a global natural event, leads to local disasters, the management of which confronts humans with an ever-increasing challenge. And yet people's willingness to help is astonishing, as the example of the flooding of the Ahr valley in July 2022 shows. What is expressed here is perhaps still best described as *emotional consternation* - a state of excitement that is a rather unknown topic to educational theories. An exception is Aloys Fischer, who in 'Erziehung als Beruf' (cf. Fischer 1922) warns against a growing rationalisation of society, which lacks *inner warmth*.²² He is concerned with a counterbalance to purely intellectual educational work, which does not really touch the state of mind or the experience of values (cf. Röhrs 1953, 93). Apart from that, the exclusion of emotions is astonishing, since the idea of education is connected with "*all basic dimensions of human interests and abilities*" (Klafki 2007, 54) and yet the state of excitement

²² The remarks by Bremer/Gruschka are exciting in this regard, pointing out that emotional expressions, such as anger or indignation, are often equated with an immature personality that has left the virtuous path of reason (cf. Bremer/Gruschka 1987, 28).

of the "awakening of forces" (Humboldt 1793/2017, 6) is at the centre.²³ This state is the result of a lack of interdisciplinarity, because the topic of emotionality is primarily a subject of psychology and neurobiology. The neuroscientist Antonio Damasio notes that emotionality plays a remarkable role in the development of the *conscious mind*, because emotions are the central prerequisite for endowing experiences with a special value (cf. Damasio 2011, 220). This should now lead us to Arthur Schopenhauer, who in his 'Fundamentals of Morality' looks for criteria that are not merely of an egoistic nature.²⁴

Arthur Schopenhauer counts *pity* as one of the three basic driving forces of human action, which, however, unlike *egoism* and *malice*, is directed towards "the good of others" and produces the cardinal virtues of justice and philanthropy inherent in man (Schopenhauer 1860/2007, 108). His observations of the state of excitement are revealing, since it is free of *all admixture* and is therefore *not* clouded by religion, dogma, myth, upbringing or education. It is a liberated emotional excitement that disinterestedly "places itself as a protective defence before the other", which is why Arthur Schopenhauer calls *pity* the "true basic moral instinct" (Schopenhauer 1860/2007, 111f., 135).²⁵ Furthermore, *pity* is the only morality "that can be said to have real, even extended effectiveness". For it does not merely touch the human being, but releases a willingness to act. In addition, there is the *immediacy of pity* - a spontaneous emotion that makes no distinction between rich and poor and releases the primordial state of justice and equality (cf. Schopenhauer 1860/2007, 132).

Very exciting features emerge for the charging of the concept of vocational education:

- *Compassion* as *emotional touch* transforms the abstractness of climate change into an attitude of solidarity by turning sympathy into a shared surface of representation.
- *Compassion* as an *emotional arousal* flows over into a readiness to act and turns the gaze to more complex factual contexts.

²³ Certainly, the field of *emotions* plays a role in the early reform pedagogical works, but more as a methodological than as an educational theoretical moment. Likewise, after 1945, e.g. in connection with the publication "Die Unfähigkeit zu trauern" (Mitscherlich/Mitscherlich 1967), clear traces of emotional educational impacts can be found, which, however, have hardly touched the field of vocational education. However, something similar can also be seen in general education (cf. Klika 2018).

²⁴ In the contemporary debate, the concept of compassion is discussed in a much more comprehensive and differentiated way than can be read in Schopenhauer. Thus, depending on the field, a distinction is made between moral-theoretical, phenomenological, neuroscientific and psychological justifications (cf. Saxer 2021). Corresponding differences then lie between the concepts of compassion and pity, but also in the delimiting form of empathy. The concept of compassion addressed by Schopenhauer has a moral theoretical foundation, although this does not distinguish between pity and compassion. However, if we take Olga Klimecki's criteria as a basis, then Schopenhauer's concept of pity would rather be that of compassion. For, according to Klimecki, the action-guiding moment of helping springs from compassion rather than from a *stressed* feeling of pity (cf. Klimecki 2014, 82). Incidentally, Schopenhauer's derogatory remarks about women are not commented on further at this point, only deeply criticised and noted with shock.

²⁵ Here we should discuss Friedrich Nietzsche's rebuttal, to which Theodor W. Adorno also refers. In essence, their reproach is that pity does not change anything about the tragic situation itself, but rather consolidates it (cf. Adorno 2019/1963, 258).

- *Compassion as emotional affection* signals readiness to communicate, which is still shown in its *first* impact without prejudice.
- *Compassion as emotional horror* poses the question of what can fundamentally be called just.

Compassion thus releases morality, which does not emerge as a categorical principle or a political cause, but as an *emotional moment of a sense of justice*. It is the moment alone that *touches*, that is felt to be unjust and that now opens up another important moment for the idea of vocational education:

- *Compassion as emotional irritation, as a reason to ask questions.*

It is this further idea that is so decisive for the charging of the vocational education concept, especially in the field of climate change - a feeling resulting from the released inner restlessness of having *to ask questions in order* to be able to get to the bottom of the injustice that has spontaneously grown up. It should not go unmentioned at this point that teaching only becomes meaningful when the students ask questions on their own impulse and thus tie the subject matter back to themselves. What follows from this, however, is described by Friedrich Nietzsche, of all people, who repeatedly criticises pity in many of his writings. Pity, he says, is empty and fruitless because it is merely based on the feeling of pain. And so pity tips over into narcissism, is instrumentalised and elevated to a "religion of pity" whose hollow purpose is to appropriate the grief of others out of selfishness. But Nietzsche, in contrast to Schopenhauer, focuses here primarily on the pastoral appropriation of a basic Christian virtue that was common at the time, in which pity was regarded as an instrument of conversion. For this reason, Nietzsche notes that a *true* interest in the state and in overcoming suffering can be seen as a thoroughly enlightening and valuable motive - an idea that Nietzsche turns into "Mit-Freude" in his usual rhetoric (Nietzsche 1954, 201; also Nietzsche 2011, 130, 144f.).²⁶

The evocation, admission, acceptance and discussion of *compassion* should be given special importance in the field of climate change, or as Jürgen Deuschle and Marco Sonnberger aptly put it, "more reflection, more feeling, less (instrumental) reason" (cf. Deuschle/Sonnberger 2009, 25). For the suffering that environmental disasters cause may and must also *touch in* order to elicit sympathy. It is the basis for an emotional colouring of events that shape us and that *occupy* us within. Such moments of compassion are in a way the counterpart to the rationalistic search for causal chains of action, which is why efforts of reflection have their roots in precisely those irritations. And further, compassion leads to humanity because it brings us closer to the *human*.

²⁶ There is certainly plenty of room for debate about this unusual figure of pity, which could be connected and explained in depth. This would primarily concern Nietzsche, who is often misinterpreted as an opponent of compassion, since he tailors his criticism to a certain social level and criticises its narcissistic appropriation.

3.2 The Other and the Stranger

Climate change is unjust. This sober statement can easily be drawn as a conclusion to the findings of the Intergovernmental Panel on Climate Change. The industrially strong countries, which are the main causes of climate change, provide government aid to build dams, extinguish fires, and so on. Developing countries cannot do this, but suffer considerably more from climate change (see IPCC 2019a; IPCC 2019b).²⁷ However, all disasters have one thing in common: high media attention. And this is particularly focused on the portrayal of the people affected, in order to capture the suffering in their faces at the moment of misery. This creates a space for the viewer to identify with the situation, which reminds him of the possibility of his own vulnerability. Making other people's suffering visible takes the viewer out of their *place of self-absorbed morality, because the Other touches me in myself* (cf. Butler 2018, 179f.). But it is not only *compassion* that rises, but also the question of *complicity*. After all, global climate change is human-caused, which is why the responsibility ethics perspective it contains focuses on a morality that is tied back to action, "in which the consequences of action matter" (Butler 2018, 144). It is the turning away from the *moral narcissism of a principled Kantianism*²⁸ and the turning towards the ethics of responsibility as spelled out by Max Weber, Hans Jonas and others. And this presents itself, above all in Hans Jonas, as a first ecological impact in which man is confronted with the dangers of his increased possibilities of disposal over nature: "Power and danger make duty manifest, which, through the choice-related solidarity with the rest, extends from one's own being to the general even without special consent" (Jonas 2003, 248). But it is precisely in the question of *complicity* or *co-responsibility* in climate change that the 'principle of responsibility' seems to fail. For such responsibility addresses the individual primarily at the level of *consequential responsibility*, which cannot be realised at all despite adhering culpability. Julian Nida-Rümelin argues, for example, that one is fundamentally responsible for consequences of action, but not for "which coincidences, which I cannot control, lead to the realisation of one consequence of action and not the other" (Nida-Rümelin 2011, 111). What is brought here in the field of vision of a mathematician to the concept of *probability distribution*, however, does not do justice to the person who will have to live and suffer under the real consequences.²⁹ Against this background, the idea of responsible ethics moves over to the "foreign victims" of climate change, such as the people in the Indus Delta of Pakistan, who claim recognition of their suffering as a result of changed environmental conditions (IPCC 2019a, 8).

²⁷ According to the IPCC, "investments in the order of tens to hundreds of billions of US dollars per year" are necessary for global coastal protection - an order of magnitude that cannot be afforded by smaller island states (IPCC 2019b, 26). In addition, vulnerable populations in regions at risk, such as the subtropics or the Indus region of Pakistan, face very high levels of damage (cf. IPCC 2019a, 16).

²⁸ Butler refers here to Adorno's lectures on moral theory, in which he condemns Kant's ethics of principles as a relapse into the "social organisation of individualism". For in this, morality degenerates into individual appropriation, in which people are only with themselves and exclude the consequences of their own way of thinking and acting (Butler 2018, 144f.).

²⁹ An overview of the various forms of 'responsibility' is provided in the 'Handbook of Responsibility' (cf. Heidbrink/Langbehn/Loh 2017).

It is therefore primarily a matter of a recognition-theoretical perspective that emphasises being addressed by the *Other* and making vulnerability visible.³⁰ This perspective should now catch up with what cannot be achieved in the field of vision of the consequences of action alone - the opening up of intersubjectivity, which is represented in the face of the *Other* alone. And this *Other* is also the person in Pakistan struggling for esteem, who *touches* as a person insofar as his or her existence receives attention.³¹ And it is these touches that emphasise the constructive idea of recognition theory, because the situations in which recognition is carried out also mean *settling into the world* (Adorno) - in other words, bringing to light an attitude that needs to *change life* (Foucault). It becomes difficult when the appeal to "mutual recognition and respect of equal value as a person" echoes into the *unknown* (Jaeggi/Celikates 2017, 68). For what if the presence of the *Other* remains unrecognised - that is, it is a *stranger* whose contours remain blurred or unrecognised in the complex of climate change? Judith Butler takes up this idea indirectly, using Emmanuel Lévinas as an example to show that the theoretical figuration is "culturally and geographically limited" (cf. Schriever 2018, 99). The reciprocal relationship therefore always presupposes being recognised - a receptivity "that makes us vulnerable" (Butler 2018, 123). But the global interconnectedness of economic circuits removes this *other*, turns it into an "invisible third party", a *stranger* in the dark. Not even the figure of the *idealised community*, from which a normative expectation confronts the subject's actions, can help here (cf. Honneth 2019, 126). So how is recognition to be thought if there is no *relationship* (cf. Butler 2021, 347)? How can there be talk of professional consequential responsibility if not only the consequences of action as such remain blurred, but also the required affectedness (->compassion) falls into the unknown?

It will be the task of the vocational school to make this *stranger* visible in the first place, to catch up with it as part of the vocational reality in order to give possibilities for a change of perspective (cf. Stojanov 2007, 45). It is essential to overcome the *strangeness* of the *Other*, which is a consequence of the very narrowly defined professional projection space so far. In fact, the space that marks the deposited boundaries of professionalism must be expanded. In this space, the stranger remains a stranger, even if the real consequences of practical work have already overcome the strangeness. Thus, the everyday constructions must first be deconstructed in order to grasp everyday professional reality anew in this way.³² Such expansions are then also not artificial supercharges, but comparisons of a globally developed professional world of work. Admittedly, this is easy to say in the shell of a theoretical figure, because the places of the consequences of professional trade are not only difficult to trace, but also confusing in their

³⁰ This excerpt is intended to be long, as the field of publications on recognition theory is broad and ranges from Immanuel Kant, Georg Wilhelm Friedrich Hegel and Johann Gottlieb Fichte to modernity, such as Emmanuel Lévinas, Jacques Lacon, Jacques Derrida, Axel Honneth and Judith Butler (cf. Siep/Ikäheimo/Quante 2021). For the development in the pedagogical field, especially Judith Balzer (Balzer 2021), whereas Axel Honneth offers an overview of the cultural-historical history of ideas (Honneth 2019). The breadth of the approach can be traced in the 'Handbook of Recognition' (cf. Siep/Ikäheimo/Quante 2021), with Rachel Jaggi and Robin Celikates providing an insight into forms of systematics (cf. Jaggi/Celikates 2017, 68f.).

³¹ The concept of touch is not found in this way in Lévinas, rather that of receptivity. But touch has a different intersubjective relationship, since receptivity has only a passive character, touch emphasises interaction more.

³² Cf. the remarks by Berger/Luckmann on the construction of everyday reality and the social construction of language and knowledge in the context of everyday world (cf. Berger/Luckmann 1997, 21f; 36f.).

number. So who is the *Other* hidden in the professional image of carpenters, hoteliers or painters? Even if this question strains the mind, it is based on the realities of globalised economic cycles. Flinching and distancing oneself would mean putting climate change on the back burner under the protection of the well-protected inwardness of company boundaries.³³ This "retreat into the peace of inwardness"³⁴ no longer corresponds to the idea of competence as originally conceived by Heinrich Roth. For here, *moral* agency is at the centre of factual, social and self-competence, which explicitly includes a "critical socio-political enlightenment" (Roth 1976, 382, 517; also Ketschau 2018).³⁵

One could also argue with the accusation of degradation, as formulated by Rainer Forst. For the condition in which people are virtually *forced to* live in a situation that they themselves did not cause and cannot change can certainly be outlined as a direct form of degradation. In terms of the overall ecological situation, it means that even if the contribution of individual professional actions to the overall ecological situation is minimal, the sum of all of them deprives people of the possibility of perceiving their own claims by third parties, which Rainer Forst calls "the phenomenon of legitimising 'invisibility', of being dominated without sufficient justification" (Forst 2022, 153).

3.3 Enlightenment and Knowledge

When *knowledge is mentioned* here in connection with vocational *education*, it is in the sense of an enlightenment idea. The starting point for this consideration is the approach of work and business process orientation, from which vocational education and training determines its content. Fixed in the framework curricula of the KMK, they have a high degree of continuity in terms of content, as amendments are usually made at long intervals.³⁶ This also applies to the vocational textbooks used in vocational school teaching, which are thematically oriented to the curricula. In this way, it is guaranteed that the focus of vocational education and training is

³³ The example of Pakistan is exemplary. According to the Federal Foreign Office, imports amounted to 1.1 billion euros in 2019, with "mainly textiles, leather goods, sporting goods, shoes and medical instruments" being imported into Germany (Auswärtiges Amt 2022). At the same time, the country suffers more than almost any other from the consequences of climate change. Floods and the resulting epidemics, among other diseases, as well as flood victims and 'climate refugees' are an annually repeated drama (cf. BpB 2002). It would therefore be quite possible to use the example of leather goods production (Pakistan) to catch up with the *other side of* this trade in the context of vocational school teaching (textile and fashion sewing). But this is not part of the KMK framework curriculum, which is why corresponding bridges cannot be built here.

³⁴ This expression comes from Theodor Litt, who does not refer to climate change, but marks the consequences of a concept of education set out by Wilhelm von Humboldt. For this was directed against the external world, against "banal usefulness and external expediency", which is why the educated personality withdrew, into the "holy land" of the interior (Litt 1959a, 118).

³⁵ Even critical statements lapse into mere abstraction when they speak of the "holistic orientation of vocational learning towards material, social and personal competences [as] demanding postulates that are widely judged to be indispensable in view of the increasing demands in the economy and society" (Euler 2020, 216). For it remains completely unclear to what extent the demands of the economy and society are now understood merely in the context of an operational coping task or as the assumption of globally increasing responsibility.

³⁶ The reason for amendments usually lies in changes in the world of work, the extent of which ultimately determines the occasion. Most recently in the hospitality industry (2021), whose old framework curriculum from 1996 has now been fundamentally renewed, which also provided the opportunity to integrate the standard vocational training position.

actually on the company's work requirements and that the contouring of vocational action competence is shown as a theoretical penetration of practical demands. But what happens when new requirements for action arise as a result of social development? Wait until the changed initial situation gradually develops into a typical work process? This impression is not entirely absurd, as the example of *biodiversity* shows. For example, the topic of ecological diversity has an enormously high priority in the field of sustainability research, which is now also reflected on the political agenda of the federal government. In contrast, the framework curricula of the catering industry do not include the topic – a picture that is then also reflected in the current textbooks (cf. Laux 2018 as well as e.g. Brandes et. al 2022).³⁷ So really wait until the working world changes in the direction of ecology? But even for companies that have changed their corporate philosophy in the direction of sustainable action, the 'inertia' of the professional environment poses a problem, since their practical actions do not coincide in all points with the regulatory means of vocational education and training - a problem that primarily affects chamber examinations (cf. Stomporowski/Laux 2019, p. 145f.).

Thus, the insight remains that with climate change, other knowledge becomes significant, which can hardly be brought into line with the existing training framework conditions. So the heading can only be: *Enlightenment*. And even if the objections of an "alienated reason" still resonate (Adorno 1997/1944, 111), without a broader professional enlightenment, the social transformation process will not succeed. But this is now confronted with yet another problem: *Time*. For the urgency of the task does not allow for waiting for long-standing processes of amendment and adaptation.³⁸ Climate change is already a reality, which is why changes are necessary here and now.³⁹ But as long as the idea of work and business process orientation is at the didactic centre of vocational education, they stand in the way of necessary further development like "leg irons of a perpetual immaturity" (Kant 1784/2022, 18f.), especially since their driving force is oriented towards the *normative power of the factual* (cf. Jellinek 1914, 338). However, if vocational education does not want to completely abandon its claim to *education*, then further references to meaning would have to be obtained in order to be able to place the possibility of self-determined judgement on a broader footing. *Knowledge* is assessed here as a fundamental prerequisite for *understanding* the various influencing contexts of

³⁷ At least small changes can be recognised. For example, in the updated version of the textbook 'Der junge Koch - Die junge Köchin' (a standard work for teaching in the hospitality industry), short sections on the topic of sustainability or ecology have been included (e.g. Brandes et. al 2022, p. 665).

³⁸ In this respect, even the in itself pleasing development in the field of model experiments on BBNE is clouded when the résumé reads: "The greatest challenge is therefore not the development of new concepts, but the establishment of new practices" (Kuhlmeier/Weber 2021, 434).

³⁹ The results of the IPCC's current risk assessment are very clear. Failure to act will lead to irreversible damage. Moreover, with increasing global warming, even adaptation efforts will no longer lead to the desired success (cf. IPCC 2022, 26). So when the German government stipulates in the Climate Protection Act, amended in 2021, "that emissions from agriculture [...] must be reduced [from 61.1 million] to 56 million tonnes of CO₂ equivalents by 2030", a time dimension of nine years has been set. To be successful here, it will not be long to consider the process as a matter of 'business management' alone. What is also needed is a comprehensive knowledge of how to act in the company, which would have to be started in the training stage, so that the process of reducing emissions is not seen as an encroachment from outside. To this end, it would be helpful if, for example, alternative forms of production, land use concepts, cultivation programmes, etc. became a compulsory subject of training (cf. UBA 2022; UBA 2020, 107).

meaning in their claim and in their intellectual depth.⁴⁰ What is needed, then, is apostrophised here with the well-known keyword of *enlightenment*! It is about the broader projection surfaces of professional work, which means above all being informed about the consequences of professional action. The goal is a responsible ethical *attitude towards the profession*, which is to be emphasised as a necessity in order to be able to bring about the prerequisite for the much-cited social transformation process. To portray this as a *conflict of loyalty* with one's own training company, as Klaus Beck suggests, is completely absurd. It is a strangely antiquated image of an obedience-postulated relationship between trainee and employer that is invoked here (cf. Beck 2019, 5). The development of extended knowledge references initially only means as much as that the *preconditions* for a different action are laid out, which is why operationally effective action knowledge does not need to fear any emptying of meaning - even more, it is likewise one of the necessary conditions in the context of weighing ecologically manifest action (cf. Knoblauch 2013, 352ff.).⁴¹ Finally, at this point Georg Kerschensteiner is right when he aptly describes the connection between knowledge and vocational training as follows: "Only where knowledge and ability are increasingly sought out of the organising form of value and in this way are completely woven into the structure of meaning, where it gives a view and insight into value relationships of goods and into meaningful factual connections, where it penetrates into the deeper layers of meaning of composite goods and allows the last hidden motives of our actions to be grasped in their value roots, then knowledge and ability mean something significant in the concept of education" (Kerschensteiner 1928, 22).⁴²

3.4 Criticism

Theories of education are *critical*. Such a statement is in itself banal, since it is about a 'being-wanting' that detaches itself from the given state and aims at a better future. The 'critical spirit' of educational theories is therefore an expression of such a movement of thought, although *critique* is the result of reflection, but reflection is not synonymous with critique (cf. Figal 2021, 348). The consequences of a lack of critique can be expressed with Theodor Litt as follows: "Those who see wrongly also act wrongly" (Litt 1959a, 128). The absence of criticism in the context of fundamental debates, on the other hand, makes one wonder, since it means that the given conditions do not give rise to criticism and that there is no serious room for interpretation. This is unusual in itself, but is particularly surprising against the backdrop of climate change. It should also be added that, as Klaus Beck notes with regret, there is an overall lack of a *paradigmatic basic discussion* within vocational and business education (cf. Beck 2019, 1).⁴³

⁴⁰ In this context, it should be emphasised that the expansion of knowledge references also means an enrichment of professional *identity* - a further development towards a deeper professional culture (cf. Knoblauch 2013, 353).

⁴¹ In this context, the coordination matrix designed by Florian Kaiser and Urs Fuhrer is informative, as it makes manifest ecological action dependent on a multitude of interwoven forms of knowledge. Moreover, it is emphasised that knowledge alone does not lead to a concrete decision to act, but potential preconditions for it are deposited, which is described as "*elasticity*" (Kaiser/Fuhrer 2000, 63).

⁴² On the one hand, Kerschensteiner opposes the prevailing view of the 'book school' at the time, in which rote learning (being *taught*) determined the level of education (cf. Wilhelm 1957, 46).

⁴³ Such a fundamental discourse was carried out in 2019 between Klaus Beck and Günter Kutscha in *bwp@-online* (³⁵). However, the core of the dispute quickly became clear: it was a reproduction of well-known patterns

The topic of climate change certainly lends itself to this, but would also be in danger of possibly coming along with a shake-up of the principles of vocational education. For this reason, the search is currently on to find the right sustainability competences to be developed in order to make the upcoming problem of coping with climate change the task of qualification requirements (cf. Rebmann/Schlömer 2020).⁴⁴ It is certainly an evasion of the question of which critical moments vocational and business education as a whole has to face if the transformational change is really to succeed. This is understandable to a certain extent, since the consequences of climate change unsettle the foundations of humanistic values such as maturity and freedom, which were thought to be secure.

Maturity in Criticism

Maturity has a firm place in the history of educational theories. The same applies to the concept of *emancipation*, which intentionally leads to *maturity* and, in its political turn, amounts to a process of social democratisation (cf. e.g. Lempert 1974, 26ff.). This strand of discourse is hardly echoed at present, even if there is talk now and then of a critical-emancipatory theory of vocational education and training (e.g. Büchter 2019; Kaiser/Ketschau 2019). Thus, in the language of many vocational and business educators, *maturity* remains as an inviolable target formula of pedagogical action, the naming of which, however, often does not go beyond a conceptual setting (e.g. Schütte 2020, 393; Reetz/Seyd 1999, 424).⁴⁵

A completely different picture emerges in general education. Here, strong lines of discourse run through the centre of which is the question of how exactly maturity is to be grasped, when its spelling out encounters an already predetermined level of social structure. In answering this question, there is talk, for example, of ideology critique, which is to be understood as a *never-ending task* in which maturity becomes the elementary (pedagogical) force of a progressive democratisation process (cf. Bünger 2013, 214). Markus Rieger-Ladich, on the other hand, evaluates *Mündigkeit* as a *pathos formula to be overcome*, which would have to be transformed into a *relational concept* "that emphasises the *simultaneous* dependence and resistance of disciplining and rebelling, of submission and critique, and denotes the striving to transgress existing boundaries" (Rieger-Ladich 2002, 441). Such statements, however, always imply a 'coming to terms with the world' associated with coming of age and an associated 'moving forward'. Thus, the moment of *progress* remains. In contrast, Theodor W. Adorno, in a dialogue with Hellmut Becker, emphasises that "precisely in the zeal for change, it is all too easily suppressed that attempts to really intervene in some particular area of our world are immediately exposed

of dispute between critical rationalism and critical theory. This debate would certainly have had a different quality if Günter Kutscha had more clearly outlined the "critical pragmatism" he envisaged at the end (Kutscha 2020, 6). For Jürgen Zabeck also speaks of a "rational reconstructive theory of vocational education and training", to which, however, he also adds only brief remarks (Zabeck 2013, 15).

⁴⁴ In a certain sense, the path towards sustainability competences has an affirmative character, as the social status quo is not subjected to critical examination (cf. also Schwandt 2010, 31). In this form, it is reminiscent of the 'weak sustainability position', which evaluates coping action as a strategic and less reflexive task (cf. Hauff 2021, 60ff.).

⁴⁵ It is significant that the term "Mündigkeit" (maturity) is not listed in Jörg-Peter Pahl's "Lexikon Berufsbildung" (Dictionary of Vocational Education and Training) (cf. Pahl 2015).

to the overwhelming force of the existing and appear condemned to impotence" (Adorno 1969a, 147).⁴⁶ This can be followed here insofar as climate change increasingly disenfranchises humans, depriving them of the possibility of opposing the overwhelming power of nature in an enriching way. The melting of the glaciers is emblematic of this. The dependence that Markus Rieger-Ladich speaks of thus fades into mere powerlessness.

And yet professional work is *always* about shaping. This means that *professional maturity* apostrophises the recognition and admission of boundary lines, but in the pursuit of transgression (cf. Rieger-Ladich 2002, 450). But this does not yet say in which direction transgressions are to be thought - as a movement towards what? This is precisely where the special aspect of *ecological maturity* comes in. For with it, the question of movement is posed anew, because action in the sense of ecological demands is definitely accompanied by a distancing of involved possibilities! This is not to be confused with the admission of existing borderlines, but rather the *self-confident* renunciation of options for action. What Rieger-Ladich only hints at with his reference to the "inescapable dependence on others" turns out to be a pause and ultimately a retreat in the face of climate change. Karl-Heinz Dammer formulates it similarly when he traces the human being in his distress and understands "well-understood maturity [...] as an exit [...] from the self-inflicted consequences of a maturity associated with domination" (Dammer 2014, 90).

In a certain way, Plato's allegory of the cave could be cited here, in which he describes the arduous path to knowledge as stepping out of the familiar projection surfaces of everyday reality. These are now shaken at the sight of new knowledge, which is why acting according to old habits no longer seems possible. Without straining Plato's epistemological level too much, it can be stated that ecological maturity is once again crossing over from the existing field of vision of operational work processes into the realm of occupation-related consequences of action. And these can certainly shake the hitherto habitualised understanding of responsibility references. The question now arises as to what exactly it is necessary to free oneself from, what emancipation still means. In any case, vocational *education* must work towards these borderlines, tensions and ruptures "instead of smearing [them] over and advocating some ideals of wholeness or similar nonsense" (Adorno 1969b, 119).⁴⁷

Freedom in Criticism

Theories of education apostrophise and address the idea of *freedom in* particular. Without freedom, there is no self-determination and no maturity, because "freedom is the first and indispensable condition for this education" (Humboldt 1792b, 76). This can be read without discounting the entire history of ideas in the theory of education, since it is about the special

⁴⁶ Adorno basically paints a rather bleak picture of maturity, since it is continually emptied of the encroachment of society. Only the admission of this powerlessness preserves the moment of maturity, from which it is now possible to shape it (cf. Adorno 1969a, 147).

⁴⁷ Adorno relates this statement to the tension between man's development into individuality and his nevertheless necessary qualification in the context of "his function in society" (Adorno 1969b, 118). The situation is currently similar, since people must succeed in recognising the ecological consequences of their basic vocational training at the same time.

position of human beings in nature. Accordingly, human dignity correlates with freedom, because human dignity based on "self-respect" presupposes autonomous action and judgement (Nida-Rümelin 2005, 154ff.). However, all the benefits are under constant tension and uncertainty, because out of the same freedom the changeover into "totalitarian doctrine" can occur at any time (Berlin 2020, 110). For this reason, Immanuel Kant concludes, *education* is necessary, but at the moment of its manifestation it is already caught in the contradiction of its own objective, for "how do I cultivate freedom in the face of constraint?" (Kant 1803, 27). But because man "by nature has such a great inclination to freedom that when he has been accustomed to it for a while, he sacrifices everything to it", a form of discipline should be established as early as possible in order to allow the *rules of reason* and not the *whim* and *wildness* of man to rise up (Kant 1803, 9).

Such "taming" of the human being becomes one of the main concerns of philosophical movements of thought, from whose different considerations the concept of education then also receives its very different charges and contours. This sometimes leads to high expectations when, for example, the hope of a "perfectly harmonious society" is associated with an appropriate education (Berlin 2020, 99). All in all, however, the narrowing of freedom goes hand in hand with philosophical reflection on interpersonal relations (cf. e.g. Schink 2017; Nida-Rümelin 2005; Recki 2009). The human-nature understanding, on the other hand, remains excluded or is the focus of factual mastery.⁴⁸ Or, in other words, the potential threat to subjective freedom is not seen in the turn to nature. Rather, it is the case that the exploitation of natural resources increases the possibilities of one's own freedom of action, which is why it has always been worthwhile for humans in their evolutionary development to exploit natural resources (cf. Schmidt 2009, 154). So why limit oneself? Why oppose a concept of responsibility to that of freedom of action, when the gain in human freedom has always proven to be an advantage through a detachment from natural dependencies?

It was not until late, and much too late in view of climate-related time references, that the consequential damage of environmentally destructive behaviour was declared a pedagogical task in philosophy and educational science under the keywords of an ecological ethic of responsibility and sustainability - long after the first climate conferences of the United Nations!⁴⁹ The connection between the possibilities of human beings to freely shape nature and the resulting ecological repercussions is therefore not only a very recent experience in the history of mankind, but also a connection that has hardly been taken into account within the lines of (vocational) education theory.⁵⁰ For actually, man was (and is?) an optimist of progress

⁴⁸ For example, Isaiah Berlin writes: "I can, at least in principle, shape and mould nature to my will with the help of technical means. But how am I to deal with recalcitrant human beings?" This short quote makes it clear that the actual problem of freedom only appears as a consequence of interpersonal interactions (Berlin 2017, 103).

⁴⁹ Although vocational environmental education has a certain history within vocational and business education, it is the work and projects on 'vocational education for sustainable development' that have led to greater attention since the early 2000's (cf. BMBF 2002; Rebmann/Schlömer 2020).

⁵⁰ Questions of ecology are actually not new, as they can be traced back to at least the 18th century under the keyword of sustainable use of nature, whose often-mentioned protagonist is Hans Carl von Carlowitz with his treatise *Sylvicultura oeconomica* (cf. Hauff 2021, 2f.). The transfer to pedagogy, on the other hand, took place very late and is mainly the result of environment-related activities in the 1980s (cf. Birnbacher 1980a).

who places his freedom in a certain superiority over nature - man as a subject of domination whose perspective on the environment surrounding him stands in a strictly anthropocentric view. Such a focus is identified in the current sustainability discourse as a weak sustainability position, according to which the technical innovation potential of humans holds out the prospect of mastering climate-related changes (cf. Hauff 2021, 60ff.). Or, in other words, humans remain in the position of the subject of domination and are not willing to step out of this position.

The difficulty now is to break with the position of an emphatically anthropocentric viewpoint emphasised in ethics in order to be able to put human (action) freedom with its ecological consequences of action into a discursive relationship at all (cf. Pieper 2007, 100f.). This accentuation is quasi alien within the vocational education discourse. For the formation of inner strength (Humboldt) or the political-democratic concern (Lempert), just like the view of human antinomies (Litt) and the development of a critical competence (Geißler), they all possess an anthropocentric view from which moments of freedom are derived. However, this view is hardly tenable in the face of climate change - a statement advocated in particular by the approach of *strong sustainability*, whose *ecocentric* perspective lies in an unconditional responsibility towards future generations (cf. also Leist 2007).⁵¹ The concept of critique here thus addresses a concept of freedom that means acting on nature in the sense of an exempted use of resources addressed by the claim. From this follows an expanded concept of responsibility, which now describes in a different way the traditional vocational concept of education, as it was already expressed by Georg Kerschensteiner or Eduard Spranger. Thus, an "education for responsibility" is rightly justified by the fact that action "has an effect on a moral world" (Spranger 1958, 134) and that moral obligations arise from this. What emerges, however, are the effects of action on the ecosystem, which is removed from morality, is not capable of any contradiction and is therefore in the face of *free* availability. Starting here means postulating a fundamentally different understanding of professional work, in which a concept of consequential responsibility is placed alongside that of professional competence to act. What is now still laid down as professional freedom becomes a matter of a necessary self-limitation, the overturning of which can only succeed if, in the moment of retreat, new fields of action appear on other levels (cf. Döring 2009, 36).⁵² So if there is to be talk of *freedom* now, then in an expanded ecocentric perspective, which is not superordinate to the existing anthropocentric view, but is juxtaposed to it as its dialectical counterpart.⁵³ The concept of vocational *education and training* is thus enriched, in which the existing value references appear in a different light

However, at that time it was only about "the inclusion of nature in the horizon of the plannable", but not about the possible limitation (Birnbacher 1980b, 133).

⁵¹ The so-called 'strong sustainability position' was first presented and advocated by Herman Daly in 1999, and later in a theoretically mature version by Konrad Ott and Ralf Döring in 2004 (cf. Ott/Döring 2008; Ergan-Krieger et. al 2009). The basic idea is "based on a far-reaching irreplaceability and complementarity of natural capitals to other natural capitals" (Döring 2009, 32).

⁵² What use is it if fish stocks die out as a result of alack of curtailment of freedom rights and thus, via the loss of biodiversity, the possibilities for shaping e.g. gastronomic occupational profiles are also reduced (cf. Ott/Döring 2008, 278f.).

⁵³ The admission of a *balanced* sustainability position, as represented by Michael von Hauff, for example, will have to be discussed. For as a pragmatic middle ground, as an eco-anthropocentric stance, it is perhaps no more than the negotiated compromise (cf. Hauff 2021, 65).

– a light that irritates and unsettles the hitherto untouched anthropocentric certainty, but does *not* dissolve it either, but *preserves it*.

In accordance with Rahel Jaeggi, the concept of critique used here is to be presented as *immanent critique*, since it is about transformation (cf. Jaeggi 2021). For as such, immanent critique turns to the inner contradictions of reality, but not at the price of restoring an existing order or already pre-conceived norm and value references, but in the sense of transitions. Climate change is irreversible and the changed conditions cannot be brought back. If even maturity and freedom are to be placed in a different field of vision, then a *critical-ecological* education leads to the underlying *constitutive* values whose effectiveness has become inherently contradictory in the face of changing climate conditions (cf. Jaeggi 2021, 287).

4 Conclusion: Critical-ecological vocational education at the beginning

If this special issue of *bwp@* asks about the significance of current VET theory, the answer can only be: Without a changed understanding of what the disciplinary self-understanding of vocational education and training is expressed in times of climate change, the demanded transformation process will become an arduous, if not resistant, undertaking. To this end, a critical-ecological understanding of education is needed that must reorder the idea of humanity following Theodor Litt. According to Theodor Litt, the essence of humanity is "revealed in the question of how man, intent on his human perfection, has to order his relationship to the 'world'" (Litt 1959, 54). This relationship has become a different one in times of climate change. Thus, the question of inner refinement, professional cultivation or vigilant self-assurance has always been based on the principle of an induced alienation from external dependencies on nature as part of one's own self-empowerment. In the rapture thus caused, in the face of a supposed belief in progress and an affluent society supported by it, lay the mistaken belief in a *movement of freedom* detached from environmental conditions, in which the absoluteness of every educational endeavour received its impact: Independence, self-determination and self-reliance. The cloudiness lay and probably still lies in the denial of an ecological system concept and the claiming of a partial environmental responsibility, the scope of which hardly exceeds the operational projection surfaces. This field of vision needs to be changed, which is why we are talking here about vocational *training* that ties work-related action back to a concept of ecology in which the consequences of this action are, as Hans Jonas already put it in 1979, "compatible with the permanence of genuine human life on earth" (Jonas 2003, 36). It is the admission "that maturity as human self-determination needs a natural basis, both internally and externally" (Dammer 2014, 90), which distributes the extent of *global-networked* freedoms differently. Thus, so far, the occupational consequences of action fall into the darkness of their climate-related complexity, but nevertheless lead to a responsibility that can only be grasped if the potentially "foreign" in its unfamiliarity is granted recognition from the outset vis-à-vis its own life designs. And this presupposes that the anthropocentric perspective changes to an ecocentric focus, through which the enabling of freedom could be tied back to the environmental conditions necessary for it. As a consequence, there is a voluntary obligation to make professional "action as transparent as possible in order to give as little room as possible to error and

guilt" (Pieper 2007, 46). In addition to such transparency, critical-ecological vocational training emphasises the insight into necessary self-restraints in order to contribute to the preservation of biodiversity, critical raw materials and other natural capitals. This will not work without a change in the possibilities of professional action and shaping, which is why the existing fields of learning must also be re-evaluated. This requires enlightenment, in the sense of Immanuel Kant, as an emergence from self-inflicted immaturity, which can be traced in the lack of interest in new markets, products and the like. With the increase in knowledge in the context of ecological perspectives, a fundamentally economic (and also social) focus is emphasised, which turns the understanding of a critical-ecological vocational education in the sense of a creative-constructive thought.⁵⁴ This now leads over to the *immanent critique* that places the critical-ecological education concept in the consequence of climate change. This affects constitutive values such as freedom, maturity, but also equality in their contradictory effectiveness, which is why professionalism in its self-description can only be transformative and not restorative. The project of a critical-ecological theory of vocational education outlined here is only at the beginning.

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⁵⁴ The aspect of creativity is based here on Heinrich Roth, who also assigns a "creative function" to his concept of the ability to act. For only in this form can development potential be generated from critical reflection (Roth 1976, 383f.).

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