

# The problem of scientific education

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**I**n this essay, I term the dominant educational paradigm of our time as scientific education and subject it to historical analysis in order to bring its tacit racial, colonial and Eurocentric biases into view. I subsume this cluster of problems under the general heading of “the problem of scientific education”, a problem simultaneously submerged deeply in the invisible background of current education and across its foreground inasmuch as it conditions daily educational practices beyond educators’ awareness. The delicate question to be answered is: enclosed as we are within a scientific framing of our educational system, how can we find an alternative way of looking at this educational system that will help us resolve the problem of colonial, racial and cultural subordinations inherent in its scientific framing?

To investigate this complex question, I distinguish between the constituted surface of education or science education (e.g., planned daily educational actions like lectures, examinations, assessments, teaching methods) and the constitutive background of education or scientific education (the deep-seated presuppositions that condition any educational action beyond our awareness like “naturalised” racial and colonial legacies), and suggest a shift of focus from the former to the latter. At the heart of this distinction lie the asymmetrical relationships between surface and background: the background (scientific education) and the foreground (science education) as historical

conditions of possibility for our present way of conducting education without understanding how and why.

Using archaeology and genealogy as tools of inquiry, I trace the emergence of scientific education and the concomitant racial and colonial inequities in Western modernity, especially in the works of the defining figure of Western Enlightenment, Immanuel Kant. Inquiries into the conditions of the emergence of scientific education and its historical development are then coupled with a problematisation of its present state as the dominant educational paradigm in an age of neoliberalism. I problematise this paradigm in order to show what shape its transformation can take. Further, I suggest some basic ideas on how such a transformation can be accomplished.

## **Introduction**

Based on the introductory chapter of a book I am currently working on, this essay investigates the problem of scientific education, an umbrella notion designed to cover the main problems of our time's education. It consists of four parts. The first part is an elaboration on the distinction I made earlier between science education and scientific education, that is between the constituted surface and the constitutive background of education<sup>1</sup>. The gist of this distinction is the historical groundedness of educational practices. Education presupposes a prior non-educational engagement with the historical world we live in. Our explicit daily educational practices, ideas and discourses receive meaning through a tacit and to a large extent unchosen, unassessed and unarticulated cultural, historical, linguistic, and social background of our being in a historical world. As this unassessed and pre-conceptual background conditions our articulated educational actions, understanding daily educational actions demands critical inquiries into the background. Because of its historical nature, understanding the

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<sup>1</sup> Nejadmehr, 2009.

background of education demands archaeological and genealogical investigations into the conditions of its genesis and development. Therefore, the second part of this essay is dedicated to such investigations of the pre-reflective and unquestioned background of contemporary education (scientific education). These inquiries are aimed at shedding light on the Eurocentric and colonial ground of scientific education and its emergence from the “soil” of Western modernity, where racial and colonial structures of superiority and inferiority were taken for granted. Archaeological and genealogical investigations also reveal that of the colonial past is not limited to explicit colonial practices. More importantly, it informs well-intended educational practices beyond educators’ awareness. I aim to investigate the question of why racist and colonial practices prevail in education despite a formal rhetoric of autonomy, equality and justice in liberal democracies’ curricula. The third part of the essay problematises the current state of education in an age of neoliberalism. It highlights the close relationships between the standardising ethos of scientific education and neoliberal rationality on the one hand, and neoliberal reduction of human relationships to economic rationality and education to an economic investment on the other hand. Finally, the fourth part of the essay suggests a number of shifts in focus as preconditions for counteracting neoliberal educational hegemony and making education free from racism and colonial legacies. These shifts also make education dialogic and intercultural, not a specific discipline limited to ethnic groups of non-European origin but a general framing of education released from tacit racist, sexist and colonial presumptions. The main concern of these shifts is a transformation of the constitutive background of education instead of changes being limited to the surface, namely improving teaching methods for science education. Among other things, I suggest shifts in our understanding of notions of critique, freedom, creativity, truth, and humanity as interconnected elements of an intercultural, dialogic and free way of being in the world that is based on human equality, not as an abstract right but as a practical starting point that changes the grammar of human relations with the self,

the others and the world. Such relationships would herald the end of *homo economicus* and related discourses.

Having this starting point, I subsume the educational problems of our times under the general heading of *the problem of scientific education* and subject it to critical genealogical inquiries. This is because scientific education enframes different nuances of contemporary education (e.g., intercultural, inclusive, critical). Nowadays, there is no educational tendency that defines itself as not being scientific in a traditional sense. There is a form of intellectual blackmail of being against or for science. My attempts here are aimed at a nuanced approach to science, education and their relations. Rather than being against science, I am concerned with the purity of science, its rationalities, and the fact it is taken for granted when enframing education, alongside the asymmetrical relations between the surface and the background of education. I suggest a shift of focus from the foreground — science education — to the determining background — scientific education — as a necessary step to address the right kind of educational problems. This is to change the preconditions of educational investigation by revealing submerged problems, unexpected linkages, and asking different questions than those that have dominated philosophical reflection on education. This is also an attempt to ask questions that are crucial for education, but that have not been asked, in order to make visible linkages and relationships that have not been seen.

By asking different questions within a different frame of reference I hope to shed new light on contemporary educational problems. Some of these questions are: what are the historical connections between scientific education and the political hegemony of the West and concomitant colonial and racial oppressions? On what basis has science become the exclusive framing of education, and what are the harms and resources of this enframing? Are there ways of disconnecting scientific education from the epistemic hegemony of the West and establishing a non-hegemonic notion of education? What kind of education is this and what are its

characteristics and conditions? Is there any way to establish an education that is not scientific? These questions bring together the necessity for educational transformations that go far beyond teaching methods of science and curricular issues, where the educational hegemony of science is taken for granted. They bring together issues such as the implications of pedagogy being reduced to a science of teaching, as well as being enframed by science and the practical consequences of such an education for modern individuals as self-constituting beings. At issue, here is the idea that science is placing itself in a position of becoming the cognitive, regulative and organisational framing of education and life. Addressing these issues brings to the fore the inadequacy of educational reforms as being limited to improving teaching methods of science, and concerns basic principles of foundation of education. This reveals our need to subject scientific education to informed outsider criticisms and be responsive to aesthetical and philosophical critique, ultimately to look at scientific education from perspectives outside of science — those of history, art and philosophy on the one hand and non-Western perspectives on the other. This brings into picture the geopolitics of modern science and education. To investigate these questions is a basic step towards a non-alienating notion of education, where oppressed human beings enable themselves to overcome their subordination and become the agency of constituting their own humanity: acting, thinking and talking in accordance with a style of their own rather than performing them from an inherited Eurocentric perspective.

Given the complexity of the task at hand, the essay can be read as part of a larger work in progress, where I am trying to bring together several strands of thought: Western self-criticism (conducted by a large number of critics of modernity since Marx and Nietzsche to Foucault), postcolonial studies, the subaltern project, and the decolonial camp.<sup>2</sup> My aim is to stimulate critical

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<sup>2</sup> A number of intellectuals addressing contemporary issues from the perspective of historical experiences of Latin America and Caribbean. In Walter D. Mignolo's wording: "The basic thesis [of the decolonial camp]

dialogues between critical voices questioning Western metaphysics, racism, colonialism, and Western cultural hegemony. As different modes of conceptualisation of the historical period called modernity, these styles of thought cover different aspects of this decisive epoch and its working in the present. Put together, they can create a multidimensional account of the issues I am concerned with and offer an intersectional toolkit for political interventions. They convincingly establish the intrinsic relationships between modernity and of objectifying humanity, subjecting humanity to capitalist, colonial and racist exploitation. To this set of ideas, I add the relationships between modernity and scientific education, the way in which the scientific style of thought pervaded education and tied it to the systematic concentration of power and accumulation of wealth in Europe, coupled with organisation of knowledge around the idea of the control of the other. As a result, a critique of modernity relates to a critique of scientific education, and contributes to the understanding of racism and colonialism in our time's educational regime. In this context, I see scientific education as an intersectional space of linkages, where legacies of colonialism, racism, sexism and Eurocentrism intersect and strengthen each other. They build a solid ground for the neoliberal mode of subjectification (different modes through which human beings are made and make themselves subjects) and governmentality (rationality according to which people are governed and govern themselves). In scientific education, the past intersects the present and unfolds towards the future. Further, these interactions are taking place invisibly. My aim is to reverse scientific education to an intersectional space where different modes of educational resistance can intersect and strengthen each other and offer alternative educational practices.

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is the following: 'modernity' is a European narrative that hides its darker side, 'coloniality'. Coloniality, in other words, is constitutive of modernity — there is no modernity without coloniality". [http://www.macba.cat/PDFs/walter\\_mignolo\\_modernologies\\_eng.pdf](http://www.macba.cat/PDFs/walter_mignolo_modernologies_eng.pdf). While colonialism is a historical period, coloniality is a logic behind colonialism or the colonial style of thought that exceeds colonialism.

Worth mentioning is that instead of being concerned with an essentialist definition of scientific education and related conceptual apparatus, I am concerned with the ways they can be used as tools of transformation in educational struggles — tools that enable us to intervene, act and reshape inherited patterns of educational practices. These notions are thus determined by the variety of practical uses rather than natural essences to be discovered. In order to avoid relativism and distinguish dialogic, intercultural and inclusive practices from colonial and racist uses, I use Wittgenstein's notion of family resemblances, according to which a multitude of practices can be placed under categories such as intercultural or dialogue by virtue of their sharing a number of resemblances rather than sharing an eternal essence.

To be frank, in this limited space I can only offer brief analyses that will hopefully make amply clear both my criticism of the contemporary educational paradigm and my suggestions as to how to overcome its limitations. Instead of limiting my focus to teaching methods of schools' science and knowledge acquisition, I am trying to explore an intercultural understanding of education through a shift in its horizon of intelligibility by introducing the notion of scientific education. This means not only questioning the West's colonialisation of epistemology and education, but also its colonialisation of ontology, its creating the world in its own image, its ontologisation of racial, class and sex differences. This has been done not only through force and naked oppression, but also through consent and hegemony, where education has been equated with emulation of the Western canon of knowledge, education, aesthetic, taste, and what counts as human. Thus, the changes I am suggesting concern a much wider context than just educational institutions. One of my main premises is that such transformations are not a matter of merely knowing the subordinating nature of racist and colonial norms (commonplace nowadays), but rather that they engage a will to change and demand deliberate enabling efforts from the side of the subordinated, ultimately their attaining the strength to practically delink from colonialism and racism, attaining a voice

of their own and acting accordingly. The demand is also to collectively reshape the conditions that subject people to racism and colonialism rather than focusing on individual efforts.

## Science education and scientific education

As the notion of scientific education is central to my understanding of education, it is useful for me to spell out at the outset how I use it. As I deploy it, scientific education signifies the general background of education in contemporary societies. Education is not the sum total of conscious educational assumptions and deliberate practices, but the interconnectedness of these practices and assumption, as well as the way they refer beyond themselves to a constitutive background, hidden from the critical gaze, that I call scientific education. This background embraces among other things tacit colonial inheritances, implicit biases, racial and cultural stereotypes, and common Eurocentric epistemic, ethical and ontological presumptions that give rise to and sustain racism, discrimination and inequalities between social groups and persistence of racial, ethnical and gender gaps in education. I bring this background into the picture in order to explain discrepancies between what educators explicitly believe and want to do and what they actually do. For instance, the majority of teachers in liberal democracies believe in egalitarian values. However, racial prejudices implicit in the constitutive background of education make them judge a black man or a migrant woman to be a less competent parent than their white counterparts, or to see the success of white students as normal, while the success of migrant students as exceptional. Most importantly, common implicit presumptions and biases about minoritarian social groups are not limited to those in a position of domination, but also affect members of oppressed groups and people with no intention to oppress others<sup>3</sup>. Consequently, well-intended educators and members of the oppressed group may be part of the problem of scientific education.

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<sup>3</sup> Brownstein and Saul, 2016.

Scientific education is assumed to be objective, unprejudiced and emancipatory of all human beings beyond racial, political, gender, and social divides. I aim to show that this is not the case. As the underlying foundation of contemporary education, scientific education frames widespread Eurocentric, gender and racists biases. By shedding light on these implicit assumptions and the mechanisms through which they work, I hope to bring them into view and thereby counteract their damaging effects. To use a Wittgensteinian analogy, scientific education names the wide range of tacit beliefs that individuals acquire as members of a community rather than learning them<sup>4</sup>. It is distinct from science education, which is a matter of conscious and controlled learning. An example will make this point clear. We acquire our mother tongue through an unconscious process, without being aware of its grammatical rules. We acquire the skills to naturally communicate and get a feel for what is right and what is wrong. Learning a new language, on the contrary, is a conscious process; it happens through training in grammatical rules of the new language. Language learners have not only conscious knowledge of the new language, but they can also talk about that knowledge. Analogically, scientific education refers to educational presumptions that educators acquire as members of contemporary communities, while science education refers to their controlled and conscious actions.

Considering the notion of utterance as the basic unit of language, Mikhael Bakhtin uses the notion of *chronotope* in order to signify the unspoken, shared spatial–temporal context against which any utterance takes on meaning<sup>5</sup>. Analogically, sporadic and fragmentary educational practices take on meaning, are explained and understood through a silent dialogue with a shared educational context or an educational *chronotope*, which are common background understandings and experiences that are conditions of possibility for science education in a particular time

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<sup>4</sup> Wittgenstein, 1991, pp. 208.

<sup>5</sup> Bakhtin, 1981, pp. 84.

and place of contemporary societies. The point is to highlight the spatial and temporal embedding of educational actions in order to offer a better understanding of how educators act in contemporary societies. Scientific education is an analytical tool aimed at understanding how everyday educational actions take on meaning from a background that refers to historically rooted given values and our present time. Therefore, understanding explicit educational practices and discourses demands an understanding of the shared educational background and prejudices embedded in it. Put bluntly, scientific education is *the historical a priori* of contemporary education. This notion of a priori is different from the Kantian one. Instead of being formal and independent of experience, it is embedded in contingent conditions that have given rise to it. It is not imposed to history from the outside. It is “a priori” or “transcendental” inasmuch as it sets the conditions of possibility that are constitutive for the form education has taken in contemporary societies. It is the constitutive non-actions embedded in fundamental social structures beyond school boundaries. While science education is limited to teaching activities in classroom situations, professionally trained teachers perform it through activities like definitions, demonstration, assessment, and learning. Scientific education determines presuppositions, appropriate habits and beliefs necessary for education to work.

Further referencing Wittgenstein, the implicit constitutive role of scientific education is made explicit. He distinguishes between the riverbed and the movement of waters <sup>6</sup> in order to shed light on different levels of human commitment and action. In his view, commitment to riverbed beliefs and propositions is part of one’s being a member of a community and not a matter of choice (§78). Analogically, while science education is the movement of waters, scientific education signifies the riverbed of education. While science education “refers to methods and procedures according

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<sup>6</sup> Wittgenstein, 1991, §94, §99.

to which science is taught in schools”<sup>7</sup>, scientific education is a frame of reference preceding and wider than science teaching and curriculum. It exceeds the confines of school boundaries and signifies the complex power structure that informs any educational event and policy. It is an educational ethos, a mode of educating people. It consists of shared educational commitments, which are taken for granted as part of modern life. The crux of my concern is that as time has gone by, colonial and racist ideas and procedures have become “natural” parts of the background presumptions of education. Scientific education has become the *tacit infrastructure of education*, a general sphere of knowledge that over more than two centuries has become “naturalised”. The distinction at stake here is to render this naturalness strange, rethink the ground upon which relationships between science and education rest, and question our unquestioned reliance on presuppositions that tacitly infuse Eurocentric, racist and colonial legacies into the fabric of education. It is tacit because it is hidden from critical inquiry. Beneath what we know and control about our educational practices, there is something pre-given that we are not aware of. It is an infrastructure, since it underlies educational policies and ideas, and leads educational practices in predetermined directions beyond educators’ awareness. To take an example from daily educational life, choosing free schooling happens at the level of science education. People can choose schools that show better results and teach science more effectively. However, they cannot make choices beyond scientific education, since any school they choose is based on and acts within boundaries of scientific education, as there are no other educational options available.

Nowadays, scientific education has become the dominant educational paradigm at a global level, consistent with the neoliberal matrix of power and its notion of managerial rationality.<sup>8</sup> Science education is the implicit ma of this

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<sup>7</sup> Nejadmehr, 2009, p. 6.

<sup>8</sup> Managerial rationality is a construct that assumes competing logics by different actors and in different disciplines. Managers and management

educational ideology to the local circumstances of each school. The unprecedented global spread of scientific education provides for the first time in history a basic level of common educational practices and value orientation for the globe. Accordingly, while changes in science education are achievable at local levels, attempts to transform scientific education need global engagements. As scientific education is incorporated into the neoliberal power matrix, its changes presuppose changes in the wider context of neoliberal organisation of education, the labour market, the role of the state in education, and so on. It is to rearrange basic prerequisites of education. The gap between the educational rhetoric of interculturality and its practice of exclusion and racism can be explained by the rhetoric ongoing at the level of educational plans and practices being determined by the tacit background. To disrupt the working of this pre-reflective level of maintenance, production and reproduction of racist and colonial matrices of power paves the way for educational transformations that delink educational practices from colonial and racial hierarchies of power endemic to scientific education. Accordingly, any true transformation in the surface of education needs to start from changes in its implicit background, a precondition of possibility for such a transformation.

### *Why is the distinction between scientific education and science education needed?*

Given my analysis of the two different but interconnected levels of education, the question is now: what use is this distinction? By making the distinction between science education and scientific education, my attempts in the first place are aimed at opening a new vista on education. This perspective is external to the dominant educational paradigm in order to address the problem of scientific education in a mode that goes beyond the confines of

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practitioners view rationality as purposeful and goal directed, eventually leading to the maximisation of managerial goals.

science and Eurocentrism on the one hand and is closer to educators' practical engagement with education on the other.

Critical analysis reveals that education has become enclosed within the limits of scientific knowledge, as it is enframed by and dedicated to dissemination of scientific knowledge. As scientific education has emerged and developed within the Western episteme or power/knowledge regime, its global spread has been a process of global Westernisation and uniformisation of education and its outcomes. My approach to these issues is practice-oriented, and aimed at recognising and removing obstacles that prevent education from becoming based on multiplicities of perspectives, voices and experiences, from becoming an education that enables people to reveal and overcome colonial and racial oppressions that stay in the way of cultural and epistemic equality, from becoming an education that embraces the concerns of Westerners and non-Westerners alike. With no comparable alternative perspective available, scientific education, by its totalising domination, eclipses other educational possibilities. It has become an impediment on the way to an education that is based on cultural, political and epistemic pluralities. One way of understanding this exclusionary function of scientific education and its hegemonic role is to refer to the fact that in contemporary societies, there are no or very few alternatives to scientific education. Young generations are born into and educated by it before they are able to doubt or criticise it. Belief of it comes prior to criticism. Educators acknowledge it by what they say, think and do on a daily basis, since it prevails in all educational institutions and policies, rather than just schools, and works beyond their conscious and planned educational practices. Accordingly, planned reforms are often aimed at science education, as they are easier to achieve, while scientific education remains intact.<sup>9</sup>

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<sup>9</sup> This is to distinguish between reforms concerning methods of teaching and motivating students within the established institution of schooling (reforms *within* education), and reforms in the prerequisites of education, scientific education and the general background of education,

Scientific education was developed in tandem with Eurocentrism. Thus, the problems that this causes scarcely allow themselves to be investigated and contested within a Eurocentric perspective. Without a perspective outside Eurocentrism, scientific education, by its global domination, leaves no educational outside. This is to say that the problem of scientific education is a problem of *perspective* (a matter of cultural and epistemic beliefs, which functions for the disadvantage of racialised and oppressed people) rather than a *professional* one (professional skills in teaching science). Accordingly, a solution to this problem demands shifts in the current educational paradigm and perspective rather than improving science teaching methods. Therefore, my concern here is not improving deliberate school practices like teaching, examinations or assessments. I am instead concerned with how we can make possible a shift in the constitutive background of education in order to reveal historical heritages, implicit racist and colonial biases embedded in the current educational foundation that have brought us to an impasse when it comes to equality between social groups, justice, fairness, and dialogic relations between cultures and knowledge perspectives. It is thus necessary to go beyond good intentions and ideologically correct tales surrounding current intercultural education, and conduct inquiries that go beyond counteracting explicit biases and include the part of well-intended educators in the educational oppressions: are they not themselves part of the problem? This is a multifaceted and “submerged” problem whose adequate understanding demands defamiliarisations of the familiar patterns of educational behaviour from ethical, epistemological and ontological vistas. Ethically, we need to go beyond an ethic of good and evil and subscribe to an ethic of collective action and transformation through dialogic processes

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against which we can make all our decisions regarding educational policies, programmes, activities, and methods (reforms *of* education). Correspondingly, research can concern the foundation of education, scientific education (research *of* education) or science education that are taken for granted, ultimately the best conditions for learning various disciplines (research *in* education).

(transformation of ourselves through transformation of educational structures and institutions). Epistemically, we need to go beyond science and bring in aesthetic and philosophical perspectives. We can then compare scientific education with other educational alternatives, like artistic ones, and investigate other educational possibilities from perspectives outside the Western episteme. Ontologically, I suggest a practical engagement with education instead of a cognitivist one; education needs to be practically delinked from racism and colonial legacies rather than our being theoretically aware of harms of racist and colonial discriminations. Without such a transformation, teachers will continue to enact the hegemonic educational ideas and educational reforms, which will lead to new versions of the current educational paradigm.

### *Historical and genealogical inquiries of scientific education*

As was elaborated in previous section, to investigate scientific education through perspectives of art and philosophy on the one hand and from perspectives outside the Western episteme on the other offers us a vantage point from which we can shed light on submerged educational problems. Another advantage of making the distinction at issue here is to investigate scientific education from a historical–genealogical perspective and shed light on its historical nature. This is to break free of the one-dimensional and linear Eurocentric narrative of education. This narrative structures time and history around ideas of “progress” and “development” in a way that underwrites Eurocentrism. European modernity and its educational ideology then become the inevitable destiny of the world. Historical time is linked back to ancient Greece as the origin of true knowledge and education. This time becomes then an exclusive Western chronology to the diachronic and synchronic exclusion of non-Europeans. Concerning the others, this “politics of time” is “the denial of

coevalence”<sup>10</sup>. Europe progresses and develops ahead and the others lag behind along the same path of development. Time and space are related to skin colour and biology. As will be elaborated below, this chronological, geographical and racial holism has been functioning as the rationale of colonialism. The others have been defined as being in a crude stage of development and in need of being governed. Colonial rule and education (the political and the educational) have then become interconnected as means of capitalist accumulation of wealth in Europe as the prize for being first in the development race.

Generally, educational direction and aims change over time rather than education being an orderly progression towards a unified end state. Through perpetual contest one educational paradigm has been replaced by another<sup>11</sup>. The history of education can therefore not be understood as a linear progress towards scientific education as an ahistorical educational truth. A historical approach to scientific education is an attempt to highlight its provincial genealogy as the core European educational idea since the 18<sup>th</sup> century and question its privileged position as universal, to uncover the discursive, institutional and social practices from which it emerged, as well as those through which it developed to become the key educational practice. This is to emphasise that there is no fixed essence of education or fixed set of historical events as determinants of its historical transformations. Rather it is a process-based ontology signified by flux.

Inspired by Foucault, I approach scientific education through a tripartite methodological tool: an archaeology of its context and conditions of possibility, a genealogy of its development throughout the course of history, and a problematisation of its current actuality. In its Foucauldian mode, archaeology is to “study the space in which thought unfolds, as well as the

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<sup>10</sup> Fabian, 1983.

<sup>11</sup> Nejadmehr, 2009.

conditions of that thought, its mode of constitution”<sup>1213</sup>. Thus, the spatial–temporal context and the mode according to which educational ideas come together to shape current configuration of educational power become important. I seek to unearth the context in which scientific education was made possible and came to be seen as truly educational. This is the historical context in which educational practices were linked with the obligation of knowledge acquisition, and true knowledge came to be conceived as scientific knowledge. A further point is the mode in which education and its enframing came to be constituted scientifically, whereby education became a scientific discipline. More importantly, archaeological inquiries unearth that scientific education was made possible in the same context in which the world population was classified along a line of educable and uneducable based on geography and skin colour on the one hand and the humanity of human beings becoming a function of being educable on the other. As will be explored later, the context of possibility of scientific education was an exemplary state of domination, where power relationships between the colonial masters and the colonised were locked by colonial masters, enabling them to prescribe the racist and colonial content of any

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<sup>12</sup> Foucault, 2013, pp. 85–86.

<sup>13</sup> This account of archaeology differs from what Gabriel Rockhill (2014:16) dubs as “archaeological teleology”, where the end point of history is projected back into its beginning as if education and science have always existed in the same shape as they are now. The point is rather that there has not been a natural relationship between science and education to be discovered once and for all. By using a multimodal and multidimensional methodological framework, I am trying to base my analysis on the diversity of relations between these two notions, as well as on their historical nature. They are then traced back to their geography or space of emergence, followed forward in their temporal development and related to human beings as acting agencies in their context of acting and interacting in the present. This is to map science and education as sociocultural regimes of practice and the ways in which they intersect with the each other. This is also to avoid ascribing to them eternal essences of fixed beings. All of these are necessary in order to conceptualise educational practices.

educational idea and practice, and without any dialogue with those subjected to these ideas and practices. While the archaeology of scientific education uncovers the context, mode and conditions of its possibility, genealogy interrogates its development through time and the way it became the dominant educational actuality of today. This is to shed light on the genealogical kinship between 18<sup>th</sup>-century Enlightenment as an educational project and current global domination of free market or neoliberal capitalism. For Foucault, genealogy is a form of practical critique. He uses this tool to investigate the emergence of social institutions, the practices and forms of knowledge that have shaped modern European culture. Considering genealogy as a “critical ontology of the present”, he tries to diagnose “the present time” and “what we are now” in order to question “what is postulated as self-evident” and “what is familiar and accepted”<sup>14</sup>. Foucault regards genealogy as “a form of history which can account for the constitution of knowledges, discourses, domains of objects etc. without having to make reference to a subject which is either transcendental in relation to the field of events or runs in its empty sameness throughout history”<sup>15</sup>. The main concern of genealogy is transformation of the self and power relations. It is “an analysis of the historical limits that are imposed on us” in order to investigate “the possibility of going beyond them”<sup>16</sup>.

While archaeology and genealogy interrogate the discursive and sociocultural conditions of possibility for scientific education, problematisation critically investigates the present conditions of scientific education — its actuality — in order to transform it into something better. It is to problematise some of its riverbed presumptions like systematic standardisation of humanity in accordance with the general principle of competition, or primacy of rationally calculable individual interests at a price of undermining the common. This is to work backwards and

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<sup>14</sup> Foucault 1988, p. 265.

<sup>15</sup> Foucault, 1980, p. 149.

<sup>16</sup> Foucault, 1984, p. 50.

forwards, as well as in the present and downwards. This complex whole of methodological endeavours is aimed at revealing the historical and cultural conditions that gave birth to scientific education in the first place, stripping the multiple layers of historical events away to find whether the established narrative of education continues in concord with its colonial origin or in discord, and to lift the veil and to see the foundation of education and thereby understand its problematic actuality. The problems we are dealing with here are not consensus-based or easily discernible. Rather they are, as Koopman<sup>17</sup> maintains, “submerged problems”, hidden “below the surface”; they “condition us without our fully understanding why and how”, they are “depth problems in that they are lodged deep inside of us all as the historical conditions of possibility of our present ways of doing, being, and thinking. Yet... these problems are also right at the surface insofar as they condition us in our every action...”<sup>18</sup>. However, we need to attain a critical grip on them through philosophical–historical interrogations, otherwise we easily lose sight of the kind of educational reforms desperately needed.

The kind of genealogy used here is subversive, inspired by Nietzsche, and reveals the “shameful” origins of scientific education. It reveals that an education supposed to be emancipatory, based on rational foundations and objective truths, is now shown to be based on colonialism, Eurocentrism, racism, and capitalism. Besides, Nietzsche used genealogy as a means to trace the emergence and development of human types like the ascetic ideal or free spirits. In this regard, scientific education can be related to fostering a neoliberal human type, *homo economicus* or the entrepreneur type, signified by competition and rational calculation of self-interests as guiding drives. Archaeology, genealogy and problematisation can then be used as critical tools to trace the conditions of possibility for this

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<sup>17</sup> 2013.

<sup>18</sup> Koopman, 2013, pp. 1–2.

human type in a specific time-space and geographical location, its development, and its current practice, as well as its future development. This reveals its provincial character and contingency in order to pave the way for new modes of subjectivity. Such investigations bring into the picture a dehumanised or alienated human type, and relate it to oppressive social orders in order to suggest ways of de-alienating humanity through bringing in art as a liberating perspective on science. As a result, the aesthetic notion of *homo faber* (creative animal) as a being who creates its own life and is the agent of its own knowledge and practice becomes crucial. It is released from the domination of abstract principles like capital and rational choice and is practically engaged in the world. Worth mentioning is that I do not use the notion of *homo faber* as an essence of humanity, which has to be preserved in any event, but as a counter discourse to *homo economicus*, a metaphor for human creativity that opens new human possibilities beyond *homo economicus*. What is crucial is what human subjectivity has been, what it is now and what it might become — its history, its present and its future. This is to emphasise the contingency of our “selves”, as well as the contingency of historical frameworks, their limits and our possibilities to think and act beyond them.

### *Scientific education: historical conditions of possibility*

Previous sections were dedicated to identify multiple perspectives and design analytical tools that enable us to investigate scientific education philosophically, aesthetically, genealogically as well as from perspectives outside Western educational hegemony. In coming sections, I use these tools and perspectives to reveal colonial, racist and Eurocentric biases and norms endemic to basic principles of scientific education. Historically, to think and introduce scientific education into the field of pedagogy was new and revolutionary. It was a historical event with distinct conditions of possibility and development. To see scientific education as a historical event is to question its current self-evidence. It is to establish that it was one among many competing

educational alternatives rather than being necessary. In other words, there is no natural bond between science and education. Education can nevertheless be informed by other framing perspectives, like that of the aesthetic, as will be explained later.

I am primarily concerned with grasping the way in which education became scientific; not through a theory, but through analysis of how discursive structures, norms and technologies of knowledge/power have, since Descartes and Kant, become interwoven with and developed as an integrated part of Western modernity and, most importantly, how they positioned human beings as speaking, knowing, normalised, and disciplined subjects on the one hand and how they established patterns of racial and colonial domination and hierarchies on the other. In the coming section, my focus will be on the condition of possibility of such an education and its constituent elements.

### *The subject–object split*

A basic precondition of scientific education was the subject–object split. Famously, Descartes introduced the dichotomy of subject–object, and a universal notion of the thinking subject as the primary source of certainty, into modern Western epistemology. This subject establishes its own existence unaffected by the context of its life on the one hand and nature reduced to “mere material” to be dominated by this rational subject on the other. This was a crucial step towards the West becoming the universal measure of humanity, since it brought in rational notions of thinking and knowing independent of space and time. Descartes believed in the power of reason “by nature being equal in all men”. His concern was educational: educating humanity to “apply”, use and “conduct” this power well<sup>19</sup>, since having a faculty does not automatically mean its proper use. Although Descartes’ works were indexed as Prohibited Books, his legacy of epistemic egalitarianism was extremely influential for

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<sup>19</sup> Descartes, 1997, pp. 72:2.

his time and for the Enlightenment as an educational movement. The same can be said of the dualism of mind–body and nature as mere material to be dominated through the power of reason<sup>20</sup>. Worth mentioning is Cartesianism’s importance for establishing a secular view of education alongside education as a progression towards human perfection. Cartesianism introduced methodological and epistemological ideas that brought education close to modern science. Descartes’ influence was decisive not only for Kant, but also for Enlightenment liberalism more broadly and for John Locke’s educational ideas<sup>21</sup>.

To be clear, I am concerned with general principles of education and the formation of education’s constitutive background during the last two centuries, rather than its surface and detailed accounts of different philosophers’ views on education. Accordingly, my account of different thinkers is selective and at the general level of outlining practical implications of historical ideas for current educational practices. For instance, a principle like that of the Cartesian epistemic egalitarianism, shared by John Locke, implies an epistemic atomism, since it sees reason as the shared property of all human beings. With this ability follows the responsibility of each individual to grasp ideas clearly and distinctly through use of analytical activities, since grasping such ideas in thought is crucial to knowledge. Becoming part and parcel of the tacit infrastructure of education, the implications of this principle for assessments of educational achievements is easy to discern. It also has implications for the current domination of rational choice theory in social sciences and education. There are of course several transformations, appropriations and modifications between Cartesianism and neoliberal rational choice theory prevalent in current educational practices. However, we can justifiably discern genealogical connections between the two.

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<sup>20</sup> Horkheimer, 2013.

<sup>21</sup> Schmitter, Tarcov & Donner, 2007. p. 74.

*The transcendental subject and transcendental subjectivity*

Though Descartes' work was groundbreaking, it was Kant who gave the notion of the subject its modern educational and moral significance. He maintained the Cartesian notion of the knowing subject, but as "a transcendental subject of thought" and as a necessary precondition for thinking. The transcendental subject was the condition of possibility for all knowledge, and contained all the conceptions and qualities it ascribes to objects. A tension emerged between the transcendental subject (the constitutive subject) and the empirical notion of the subject (the constituted subject). Foucault sees this tension as the "polemic of contemporary philosophy"<sup>22</sup>. He suggests "the whole history of post-Kantian and contemporary philosophy will have to be envisaged from the point of view of the perpetuation of this confusion – a revised history which would start out by denouncing it"<sup>23</sup>. Instead of a subject always situated in linguistic, cultural, social, and political situations, the Kantian notion of the subject is constitutive of all knowledge; it is a constitutive subject instead of being constituted by historical conditions. It is given before any knowledge and at the start of all cognitive processes, prior to them and conditioning them. Placed at the heart of Kant's critical philosophy, this God-subject becomes the entire concern of philosophy, since it constructed the phenomenal world, the world of its own knowledge. This notion of the subject played an important role in connecting scientific education to European imperialism. As this subject functioned as the universal paradigm of all modern persons everywhere, it gave rise to some problematic assumptions about a universal human nature. Most problematic was that it became connected with the Enlightenment's educational ideology. As the basic presumption was that this notion of the subject is transcendental, all selves were supposed to share the same structure. Education was then shaped around the idea of this notion of subject and its assumed need to progress towards perfection. Although established in the

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<sup>22</sup> Foucault, 2008, p. 105.

<sup>23</sup> Foucault, 2008, p. 107.

image of the white man, this subject was assumed to be any person in any corner of the globe, and its sectional needs valid for any and all everywhere at any time. These assumptions have since caused serious colonial-educational problems, as the white subject becomes the measure of education and humanity. Wording the assumption of a transcendental subject as “transcendental pretense”, Robert C. Solomon astutely writes:

The transcendental pretense is the unwarranted assumption that there is universality and necessity in the fundamental modes of human experience. It is not mere provincialism, that is, the ignorance or the lack of appreciation of alternative cultures and states of mind. It is an aggressive and sometimes arrogant effort to prove that there are no such (valid) possible alternatives. In its application the transcendental pretense becomes the priori assertion that the structures of one’s own mind, culture, and personality are in some sense necessary and universal for all human kind, perhaps “for all rational creatures”.<sup>24</sup>

Although “transcendental pretense” is a powerful metaphor, I prefer to term this problem as transcendental uniformity, since having the transcendental subject as the starting point in education is to impose a pre-given or an a priori form on any and all. Transcendental uniformity is at work in cultural and educational policies. In a sense, it is responsible for the radical form of individualism developed since modernity, where knowledge is considered a relationship between the autonomous subject and the phenomenal world, a world waiting to be discovered. Morality is also a relationship between the autonomous subject and the universal law of pure practical reason. In this theory social and cultural diversities have no role to play. As will be explored later, in neoliberal societies this individualism has been developed to the individual’s rational choice in relation to their self-interest. As mentioned earlier, the problem of the subject is a problem of tension between the subject as conditioned by empirical circumstances and the subject as

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<sup>24</sup> Solomon, 1988, p. 7.

transcendental condition of knowledge (tension between constituted subject and constitutive subject).

### *Homo criticus, a new human type*

Although thinkers like Descartes, Locke, Rousseau, and others did ground-breaking work when it comes to the educational ideology of the Enlightenment, the works of Kant occupy a central place in the creation and dissemination of the perspective I refer to as scientific education. He can be established as its founding father as he offers a coherent account of science, education and their relationships with human development. Generally, the importance of Kant for Western thought cannot be overestimated. Like Descartes, Kant divides Western philosophy into before and after himself. In an introduction to Kant's *Anthropology from a Pragmatic Point of View*, Foucault talks of the genesis of "*homo criticus*" through Kant's critical philosophy, an image of man "the structure of which" was "essentially different from the image of man that went before ... Which is to say that, in addition to its particular role as a 'propaedeutics' to philosophy, the *Critique* would have also played a constitutive part in the birth and the development of the concrete forms of human existence"<sup>25</sup>. In his essay "What is Orientation in Thinking?" Kant argues for a shift of epistemic paradigm, where this modern subject is encouraged to shift from methods of rational theology to that of reason. As in Kant, the idea of such a human type was anterior to its concrete empirical existence; this image had to be realised through education. In his *Lectures on Pedagogy*, he is clear about his idea of education preceding experience. However, he suggests that this idea should be taken as truth<sup>26</sup>. The Kantian notion of education is the uniting theme of his philosophy as a whole. Kant's philosophy, his image of the human and his notion of education were a break with the

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<sup>25</sup> Foucault, 2008, p. 19–20.

<sup>26</sup> Kant, LP, p. 444.

past. The core conception of this break was critical or scientific thought, as Kant saw them as synonymous.

Thus, it is not an exaggeration if we consider Kant not only as the paradigmatic Enlightenment philosopher and an educator, but also as a philosophical watershed and a turning point in Western thought on humanity, knowledge and education. Kant brought in epistemological and educational ideas that were new, enduring and adopted by other philosophers whose influence for our time is decisive.<sup>27</sup> They were at once linked backwards with

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<sup>27</sup> Johann Friedrich Herbart (1776–1841) and his students Tuiskon Ziller (1817–1882) and Wilhelm Rein (1847–1929) played an important role in the further elaboration, practical application and institutionalisation of Kant’s educational ideas, and in forwarding them to new generations of educators in Europe and the US. Like any other paradigm the Kantian educational paradigm needed these proponents to articulate it practically and theoretically. Through Herbart these ideas became incorporated into the ongoing educational reform. Herbart’s influence was such that he sometimes is seen as “the founder of scientific pedagogics” (Norbert Hilgenheger, 1993). Herbart was, however, a post-Kantian philosopher and pedagogue admittedly much influenced by Kant, a student of Kant. He had the Kant Chair of Philosophy at Königsberg University and received fame for his theory of systematic educational teaching. Kant’s idea of making education a science predates Herbart. The latter’s pedagogical theory can indeed be seen as elaborations of Kant’s ideas of the systematicity of science and the application of scientific method to education, an innovation in the methodology of human sciences that outdated its context of emergence and had far-reaching influence. To his credit we can say that “Herbart was a brilliant clarifier and interpreter who sharpened several lines of thought in Kant” (Erik C. Banks, 2005: 209). To be clear, the true shift in paradigm happened with Kant’s Copernican Revolution, bringing in its wake a clearer differentiation of various disciplines in social sciences like pedagogy, psychology and anthropology. In his first *Critique*, Kant made reason, understanding and judgement inner capacities of the human mind. Indeed, as elaborated in this essay, Kant would bring all human knowledge into the secure path of science. Critical philosophy should get the status of the paradigmatic science of physics. His influence

tradition and innovative enough to be conceived as revolutionary and a break with the past. His view of education can be conceived as representative of the Enlightenment's preoccupation with education, progress and emancipation. Kant's philosophy is a point of linkage bringing together different strands of thought (rationalism and empiricism), linking backwards to antiquity and the medieval period and forward to our time. To demonstrate the importance of Kant for our time, Manfred Kuehn writes: "the old adage that one may philosophize with Kant or against him, but that one cannot philosophize without him seems to be true as ever"<sup>28</sup>.

To be clear, Kant was part of a widespread educational reform movement in the 18<sup>th</sup> century, engaging major philosophers and writers of the time.<sup>29</sup> The ambition was to reform the educational system. Historically, scientific pedagogy was a widespread debate in the 18<sup>th</sup> century<sup>30</sup>, and the idea of pedagogy as science had strong advocates<sup>31</sup>. Indeed, during this era separation of the concepts of art and science took clearer contours and new disciplines emerged. Dilthey maintains that attempts to establish a science of pedagogy predate Kant<sup>32</sup>. Kant's *Lectures on Pedagogy*, where he advocates a shift from the art of pedagogy to the science of pedagogy, is in line with theories of some educational pioneers like the Czech educator Comenius (1592–1670) and the Swiss educator Pestalozzi (1746–1827), who tried

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was vast and encompassed disciplines as diverse as geography, history and ethics.

<sup>28</sup> Kuehn, 2012, p. 113

<sup>29</sup> John Locke: *Some thoughts Concerning education* (1683–1689), Rousseau: *Émile or On Education* (1795), J. M. R. Lenz: *The Tutor, or Advantage of Private Education* (1774), G. E. Lessing: *The Education of the Human Race* (1777), Schiller: *On the Aesthetic Education of Man* (1795), Goethe: *Wilhelm Meister Lehrjahre* (1796), A. F. Knigge: *On Human Social Intercourse* (1796), Fichte: *The Vocation of Man* (1800) are among the literature on the topic.

<sup>30</sup> Lenhart, in Munzel, 2006.

<sup>31</sup> Kerstin, in Munzel, 2006.

<sup>32</sup> Dilthey, in Munzel, 2006.

to make education scientific.<sup>33</sup> A friend of Newton, John Locke was also an advocate of natural sciences being included in the curriculum. There are five aspects that distinguish Kant. First is his idea that the desired educational transformations are not achievable by “a slow *reform* but a swift *revolution*”<sup>34</sup>. Secondly, he naturalised his educational theory through suggesting a radical shift from education slavishly “copied from old habit and unexperienced ages” to education “wisely derived from nature itself”<sup>35</sup>. Thus, he puts nature against traditional education, the latter being presented as “against nature”. He also defends modern profane knowledge (science) or “the attentive eyes of expert” against inherited and sacral knowledge. In Kant’s educational theory, obtaining a moral character is the ultimate result of education and “presupposes an already favourable natural predisposition”<sup>36</sup>. Third is the comprehensiveness and systematic unity of his educational theory and its incorporation in his philosophy as a whole. Fourth is his establishment of a teleological notion of history, where stages of human evolution corresponded to those of each individual’s development. Kant makes humanity malleable; the humanness of the human being or human nature becomes a function of education: “we animal creatures are made into human beings only by education”<sup>37</sup>. The fifth aspect is universalising and systematising his notion of education. He speaks of “The education of the human race, taking its species as a *whole*, that is, *collectively (universorum)*,

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<sup>33</sup> Kant was also inspired by the *philanthropinismus* movement in Germany, whose leading figures Basedow and Christian G. Salzmann were attempting to implement the educational theory of Rousseau’s *Émile*. Attempts to make comprehensive learning and knowledge universally available, or write encyclopaedias, are also worth mentioning. Another political and educational event, which developed into a globally important happening, was the Prussian reform in education in 1794.

<sup>34</sup> Kant, ERP, 2:449.

<sup>35</sup> Kant, ERP, 2:449.

<sup>36</sup> Kant, APV, 7:39.

<sup>37</sup> Kant, LP, 9:444, also APV, 7:324

not all of the individuals (*singulorum*), where the multitude does not yield a system but only an aggregate gathered together”<sup>38</sup>. Kant aims at an organically integrated notion of humanity, preceded by a unifying idea of the human being. Most importantly he plans for education to become scientific while connecting his idea of education to an overall plan for “human perfection”. Kant’s critical project is an educational one, where to foster the ability to use one’s own reason publicly and make progress from sensible character towards intelligible, from evil to good, is central<sup>39</sup>. To achieve this aim education must become scientific<sup>40</sup>, since it is “the secure path of science” that leads to human perfection and not the contingent path of art. Kant thus reformulates the aim of education, its problems and questions in a new conceptual framework, that of science as the paradigm of critical thinking; humanity, educability and scientificity become coextensive. Therefore, it is crucial to establish a critical dialogue with this context that made a science of pedagogy and a scientific enframing of it possible, and highlight its significance for our educational actuality rather than an anachronic reading of Kant’s notions of education, science and the transcendental subject. Genealogical-critical dialogue may highlight continuities and discontinuities, and reveal different nuances of the concepts of science and education, their relationships and their historical development through time. However, there is continuity in some basic principles of science, like those of rationality, objectivity, systematicity, and the transcendental or constitutive subject (important for Kant’s notion of science), despite disruptive paradigm shifts.

### *Kant’s Copernican Revolution in philosophy*

To argue for making education a science, as well as framed by science, and to establish a formal notion of the transcendental

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<sup>38</sup> Kant, APV, 7:328.

<sup>39</sup> Kant, APV, 7:324.

<sup>40</sup> Kant, LP, 9:447.

subject were important ingredients in the Kantian revolution. However, what makes Kant an educational and philosophical turning point is his “Copernican Revolution” in Western philosophy, through which the subject and object changed position when it comes to the basic conditions for possibility of knowledge (in the same manner that the sun and the moon changed position in the Copernican heliocentric model). Through this revolution, he introduces a new mode of knowledge of the objects of the world and established a new system of thought, critical thought. Referring to the revolution in natural science as exemplary, Kant writes:

Let us, therefore, try to find out by experiment whether we shall not make better progress in the problem of metaphysics if we assume that objects must conform to our cognition. This assumption already agrees better with the demanded possibility of an a priori cognition of objects – i.e. cognition that that is to ascertain something about them before they are given to us. This situation there is the same as was that of *Copernicus*, when he first thought of explaining the motions of celestial bodies. Having found it difficult to make progress there when he assumed that entire host of stars revolved around the spectator, he tried to find out by experiment whether he might not be more successful if he had the spectator revolve and the stars remain at rest.<sup>41</sup>

This paradigm shift was, as Lee Braver puts it, a shift from passive knower to active knower, “the thesis that the mind actively organizes and constitutes experience”<sup>42</sup>. Instead of “humbly following after God’s creation or passively recording the intrinsic structure of the world”, such a knower “boldly forms phenomena”<sup>43</sup>. Establishing an active and autonomous knower had implication for its relation to the other and the world. Through this reversal of positions, the transcendental subject became the creator of the phenomenal world, the rift between knowing subject and acting subject and between theory and practice became deeper and the knowing became prior to the

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<sup>41</sup> Kant, CPR, B: xvii.

<sup>42</sup> Braver, 2007, p. 36.

<sup>43</sup> Braver, 2007, p. 37.

acting one. The epistemological became prior to the ontological, since the priority of the knowing subject demands epistemological or theoretical engagement. Knowledge is the field of epistemology (thinking, reasoning, understanding, and remembering). Philosophy then became an epistemological inquiry into the conditions for the possibility of knowledge. The way the human mind is constituted and educated became extremely important, since in Kant the mind imposed structure and order on our experience with the objects of the world. Kant emphatically maintains that “reason has insight only into what it itself produces according to its own plan... and compels nature to answer reason’s own questions”<sup>44</sup>. Hence, Kant’s Copernican Revolution in philosophy was an anthropological turn in Western thought. As will be elaborated later, Kant made the question of “What is the human being?” the central one of philosophy. This was a paradigmatic or an epochal philosophical event in the sense that it has made European people what they are now. The Kantian style of thinking, the philosophical ethos he introduced and the related ideas have been generative of education as it is today and for its becoming scientific. He is the inaugurator of some significant intellectual events and ideas regarding the power and use of reason and the scientific form of education.

Before proceeding further, I would like to bring two methodological points to the fore. The first point is that rather than focusing on Kant’s specific ideas, I consider the broader frame of his style of thought and its general relation to science, education and the relationships between the two. My attempts are more aimed at contextualising scientific education than line-by-line commentaries of Kant. My engagement with secondary literature is to the extent that I have found it necessary and fruitful in order to clarify and develop various specific points in my understanding of scientific education. Thus, I have learned much more about topics dealt with here from many more authors

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<sup>44</sup> Kant, CPR, B: xiii.

than those cited here. The Kantian style of thought was an inaugurating event and a “revolution in the way of thinking” as he himself puts it<sup>45</sup>. Kant contributed largely to the modern understanding of humanity, and to freedom from the burden of oppressing traditions. However, as will be demonstrated in coming sections, his revolution was limited in scope; it favoured the white race and established oppressive prejudices against non-whites. It became intertwined with the colonial expansion that granted Europe supremacy over other continents. At stake here then is not an account of Kantian revolution, but the relationships between this revolution and colonial and racial oppression, and its relations with Eurocentrism in his own time as well as today. The question is whether Kantian philosophy, as the major representative of the Enlightenment, offers critical tools to counteract colonial oppression or sanctions it. Was the co-occurrence of Kant’s idea of education and colonial expansion just an accident or were they basic parts of a comprehensive development and supported each other mutually? Is this mutual support a matter of the past or does it continue to affect our present? I am trying to demonstrate connections between colonial oppression and scientific education in Kant’s explicit wordings, as well as an embedded element in his overall style of thought. The essential point to be made is that it is not important what Kant thinks. Equally important is how and through which perspective he thinks. I attempt to demonstrate that he philosophises from a racist perspective and from “the perspective of coloniality”, as the Peruvian sociologist Anibal Quijano would say. It is important to show how this is hidden in scientific education. The second point is that when I talk about Kant as the founding father of scientific education, I am aware of my investigating the genesis of the idea of scientific education from today’s vantage point. Rather than a fully developed idea, Kant stands for a “proto-idea” of scientific education as Ludwik Fleck<sup>46</sup> would put it, a historical transformation traceable to the

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<sup>45</sup> Kant, CPR, B: xi.

<sup>46</sup> Fleck, 1979.

geographical, linguistic, historical, and social circumstances of the Enlightenment. As a heuristic notion, scientific education signifies a form of *metastatic* educational transformation allowing us to discern a condition of educational alternation, the scope of its influence and the pace of its expansion. It signifies struggles and resistances, tendencies and counter-tendencies related to education, without risking giving the precise date of its birth. Accordingly, when I term scientific education as the Kantian educational paradigm, it does not mean that it was exclusively Kant who created, completed and implemented it. Rather it is about movements, tendencies and styles of thought, and some thinkers becoming pioneers and paradigmatic figures, being examples of their time. They have an inaugurating role and are their own exemplars and educators for their contemporaries. They let ideas come forward clearly by using them in new contexts and in unprecedented ways.

Kant skilfully reversed traditional roles through introducing a powerful metaphor, that of Copernican Revolution, as well as transforming the Cartesian subject from being the source of certainty into being the transcendental precondition of all knowledge. To use an hourglass as a metaphor, Kant reversed the historical hourglass. Kant's Copernican Revolution was the hourglass's neck (the *middle point* of its two chambers) through which all historical material should flow towards the future. Gaining control over this narrow passage, he then decided the flow of material, the rate of its flow, its significance, and interpretation. He needed scientific education as a means of controlling the neck of the hourglass of history. To reverse the effects of such a revolution, we need a means as strong as Kant's revolution to turn over the hourglass again.

### *The human being as an educable animal*

In previous sections, I reported on the comprehensiveness of Kant's theory of education, his notions of transcendental subject and Copernican Revolution. This conceptual apparatus, I

claimed, was a new way of looking at education, the subject, knowledge, and their relationships. This section is about the practical implications of these notions, as Kant himself accounts for. As a consequence of his philosophical revolution the notion of the subject became the main concern of philosophy: he posed the question of “What is the human being?” as the most fundamental question in philosophy<sup>47</sup>. According to Kant, this question is related to three other central questions of philosophy and can be answered by anthropology. Kant writes: “The field of philosophy in the cosmopolitan sense can be brought down to the following questions: What can I know? What ought I to do? What may I hope? What is the human being?”<sup>48</sup> *Metaphysics* answers the first question, *morals* the second, *religion* the third, and *anthropology* the fourth. Fundamentally, however, we could reckon all of this to anthropology, because the first three questions refer to the last one”<sup>49</sup>.

There are some difficulties attached to finding a straightforward answer to the question of what the human being is in Kant without seeing his oeuvre as a comprehensive attempt to answer this question from different points of view. Kant’s *Anthropology from a Pragmatic Point of View* is, however, an important text. This work, as Foucault (2008) demonstrates, is based on and intimately connected to Kant’s critical writings. Kant himself refers to one of the difficulties attached to a definition of the human being, that of self-preferentiality. He writes: “The problem of the character of the human species is absolutely insoluble”<sup>50</sup>, since there is no perspective external to humanity from which we can look at it. Rather the human being is the only “*terrestrial* rational being”<sup>51</sup>, without there being “*non-terrestrial* rational beings that would enable us to indicate their characteristic property and so to characterize this terrestrial being

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<sup>47</sup> Kant, OL, 9:25.

<sup>48</sup> Kant, CPR, A804-A805/B832-B833.

<sup>49</sup> Kant, LL, 9:25.

<sup>50</sup> Kant, APV, 7:321.

<sup>51</sup> Kant, APV, 7:321.

among beings in general”<sup>52</sup>. Therefore, the human being himself (in Kant the human is always a he, thereby my reference to the human being as a he) determines what the character of the human being is, or what Kant wants him to be. What distinguishes the human being from all other animals is that “he has a character, which he himself creates insofar as he is capable of perfecting himself according to ends that he himself adopts”<sup>53</sup>. The human being is thus the transcendental subject and the object of knowledge at the same time. Therefore, we cannot come up with more than the claim that the human being is the creator of his own moral character<sup>54</sup>. Accordingly, Kant investigates the human being from the point of view of a pragmatic anthropology or “the investigation of what *he* as a free-acting being makes of himself, or can and should make of himself”<sup>55</sup>. This is to see the human being from an educational perspective, where the human being actively transforms “what *nature* makes” of him<sup>56</sup> and brings it under the pure idea of human perfection. Generally, Kant sees “all cultural progress” in the light of how “the human being advances his education”<sup>57</sup>. Education for Kant is wider than schooling alone, though his use of schooling is sometimes interchangeable with that of education. The aim of education is the formation (*bildung*) of human moral character, which is implanted in his nature. For Kant “the character of living being is that which allows its destiny to be cognized in advance”<sup>58</sup>. This is similar to Aristotle, where he writes that “the nature of a thing is its end. For what each thing is when fully developed, we call its nature...”<sup>59</sup>. The human being is the starting point and the end result of education.

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<sup>52</sup> Kant, APV, 7:321.

<sup>53</sup> Kant, APV, 7:321.

<sup>54</sup> Kant, APV, 7:321.

<sup>55</sup> Kant, APV, 7:119.

<sup>56</sup> Kant, APV, 7:119.

<sup>57</sup> Kant, APV, 7:119.

<sup>58</sup> Kant, AVP, 7:329.

<sup>59</sup> Aristotle, 2001, p. 30.

For Kant, the human being is an amphibian capable of two modes of being and corresponding to two parts of his nature: a passive or sensible and an active or intelligible part. Partly, the human being is “an animal endowed with the *capacity of reason (animal rationabile)*”<sup>60</sup>. This “animal part of human nature” (natural predispositions, aptitude and temperament or sensibility) is what nature passively makes of the human being. According to Kant, this part is “most inimical to education that would fit us for our higher vocation... to make way for the development of our humanity”<sup>61</sup>. Partly, the human being is identified with what he actively “can make out of himself a *rational animal (animal rationale)*”<sup>62</sup>. This part is his moral or pure character (the human being’s way of thinking). It refers to what the human being actively through education makes of himself<sup>63</sup>. Kant is clear about the relationships between the human being as sensible and the human being as intelligible being. He writes: “According to his sensible character the human being must also be judged as evil (by nature), while seen from his “intelligible character ... the human being is good according to his innate predispositions (good by nature)”<sup>64</sup>. Thus, there is an inborn tension between an evil part and a good part in the human being. The important point is that education is a transformative force that brings about goodness out of evil. Kant insists that “The human being must therefore be educated to the good”<sup>65</sup>. Education is thus a progression from evil to goodness, from sensibility to intangibility. Since “nature has planted in it the seed of *discord*, and has willed that its own reason bring *concord* out of this”<sup>66</sup>, the human being is “in need of education”. Education is thus an active mode of being related to human capability to achieve perfection. An educated human being is a human being with

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<sup>60</sup> Kant, APV, 7:322.

<sup>61</sup> Kant, CJ, 20: 233.

<sup>62</sup> Kant, APV, 7:322.

<sup>63</sup> Kant, APV, 7:285.

<sup>64</sup> Kant, APV, 7:324.

<sup>65</sup> Kant, APV, 7:325.

<sup>66</sup> Kant, APV, 7:322.

moral character, “a rational being endowed with freedom”, “from whom one knows what to expect”, while an uneducated or evil human being is driven by his animal part and is without intelligible character, since evil carries within itself conflict with itself and permits no lasting principle in itself<sup>67</sup>. To elaborate more on this rather complicated issue that has challenged philosophers ever since antiquity, let me explain it through a detour. In *Politics*, Aristotle establishes a qualitative distinction between “bare needs of life” (*zoe*) and “a good life” (*bios*), and dubs the human as “a political animal” by nature in order to define the function of the city-state: “the state comes into existence, originating in the bare needs of life, and continuing in existence for the sake of a good life”<sup>68</sup>. Bare life is a means to and material on which good life can be established. In her political writings, Arendt elaborates much on this Aristotelian distinction between *zoe* and *bios*, as well as the notion of the political animal, most notably in *The Human Condition*. In her work, the political life consists not only of speech and action but most importantly of the condition of human plurality<sup>69</sup>. The point I am trying to make is that in a developmentalist account of humanity, so characteristic of Western culture, the hierarchical order between the animal and the intelligible parts of the human being is used as a distinguishing line between different human groups and races. Europe has identified itself as rational and its others as identical with the natural or the animal part of the human being.

In sum, Kant identifies the human being as an educable animal, strongly emphasising the exclusive relations between education and humanity: “The human being is the only creature that must be educated”<sup>70</sup>, while other animals behave safely out of their natural predispositions. The answer to the question of what the human being is encompasses the answers to what we can know, what we ought to do and what we may hope. Yet, human beings

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<sup>67</sup> Kant, APV, 7:329.

<sup>68</sup> Aristoteles, *Politics*, 1252b, 30.

<sup>69</sup> Arendt, 1958, p. 7.

<sup>70</sup> Kant, LP, 9:441.

become humans only through education. Accordingly, knowledge (what I can know), morality (what I ought to do) and happiness (what I can hope) are achievable only through education. In this context, this idea is crucial since it brings together the “what” and the “how” of humanity; its theoretical and its experiential aspects. Kant’s starting point is, however, theoretical or the “what”, which is the idea of humanity and not the “how” or its experiential reality, as his principles and ideas come before practice. In sum, Kant, following Aristotle, will transform the first or raw nature of humanity into an educated second or moralised nature.

By inventing a natural connection between the ideas of humanity and education, Kant played a central role in the construction of the modern European notion of humanity and its educational, moral, epistemological, and ontological status. Accordingly, my main focus will be on Kant and his role in establishing Europe, and the white “race”, a minor part of humanity, as the educational points of reference for the globe and humanity, and his role in the classification of humanity across colonial and racial lines and the concomitant division of epistemic labour. He constituted a normative notion of the white race as the paradigm of educated humanity, the embodiment of progress through education and morally superior to the rest of the world. This is what I term as transcendental uniformity.

### *Kant, scientific education and transcendental uniformity*

The previous section explored Kant’s view on the role of education in human development. It established that in Kant’s account, the human being, through actively educating himself, can reach their destiny, human perfection or freedom under the moral law. It also demonstrated that Kant considers education as an active approach to one’s life, through which the crudity of one’s natural dispositions and animal tendencies can be transformed to moral character. The human being can develop

good out of evil<sup>71</sup>. Through struggling and overcoming obstacles that one's animal inclinations erect on the way to practical education (education for freedom), one can make oneself worthy of happiness<sup>72</sup>. As the life of individuals is finite in relation to human perfection, the human perfection is a matter of progression through countless generations. This progress is an integration of humanity under the same set of laws, that of pure practical reason. Education was a moralisation process. Besides, Kant writes of "The education of human race, taking its species as a whole, that is, collectively (*universorum*), not all of the individuals (*singulorum*), where the multitude does not yield a system but only an aggregate gathered together"<sup>73</sup>. This is to step by step establish a "civil constitution". In Kant, the human being as a rational animal first preserves himself as individual and as species (cultivates himself), second educates himself for domestic society (civilises himself), and third governs himself (moralises himself) in accordance with principles of reason<sup>74</sup>. These phases correspond to the human being's three natural predispositions: technical (the ability to produce objects), pragmatic (to establish relationships with other human beings and use them for his own purpose), and moral predisposition (to treat himself and others according to freedom under law)<sup>75</sup>. In order to progress in this predetermined way — and for one generation not to destroy the previous generation's achievements (though regressions are unavoidable) — education should become a systematic discipline based on a plan and principles or a science (*Erziehungswissenschaft*) that contributes to develop human nature in such a way that the human vocation or destiny is realised. This notion of progress became however a mission for the white race and thus racist and Eurocentric.

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<sup>71</sup> Kant, APV, 7:329.

<sup>72</sup> Kant, APV, 7:328.

<sup>73</sup> Kant, APV, 7:328.

<sup>74</sup> Kant, APV, 7:322.

<sup>75</sup> Kant, APV, 322.

As G. F. Munzel rightly suggests, Kant's notion of education demands "several approaches"<sup>76</sup>. In this section, I am concerned with Kant's idea of making education a science and his interest in the formation of humanity through scientific education, which is a mode of subjectification (the way people are made and make themselves subjects) modelled through science. As we have seen, it was imperative for Kant that the art of education should be transformed to a science of education, to a systematic unity of manifold human empirical states of being under a single idea (the idea of human perfection). This peremptory idea is a leitmotif in his work. Generally, Kant's attempt is aimed at bringing all human affairs into the "secure path of science" or making them scientific in order to secure their pre-planned end results. As the human being can only become human through education, it is crucial for education to "follow the secure path of science"<sup>77</sup>. Therefore, "the art of education must be transformed into science"<sup>78</sup> in order to secure its predetermined end result, namely a scientific or rational type of human being who acts in accordance with the pure or practical reason's imperatives. Kant pays the same amount of attention, if not more, to bringing anthropology (the inner knowledge of subjectivities) and geography (the outer knowledge through observation of the human being's place in nature) into the critical path of science that was "introduced by Newton into natural science". The question is: why did he pay such an attention to science? Is it "providing a potentially secure scientific basis for metaphysical reflection"<sup>79</sup>, as Harvey says? It probably is. Through making them scientific, Kant not only links three compatible dimensions of the human being but also views him from three perspectives: what he *is* (geography), what he *can make* of himself (anthropology), and the *means* (education) through which he can transform what he is into what nature has planned for him. These three *pragmatic* perspectives are compatible with and a basis for

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<sup>76</sup> Munzel, 2006, p. 122.

<sup>77</sup> Kant, CPR, B/vii.

<sup>78</sup> Kant, LP, 9:447.

<sup>79</sup> Harvey, 2009, p. 21.

Kant's critical project, where he deploys logic and transcendental subjectivity. What is most distinctive of my approach is the central place I give to education within these three perspectives. I am convinced that it is not possible to comprehend critical philosophy as such, and Kant's *Geography* and *Anthropology* in particular, without paying attention to his engagement with education as a science. His scholars pay increasing attention to his *Anthropology* and *Geography*, but his *Pedagogy* is still waiting for this attention. My aim is to bring these three perspectives together as significant for how Kant wants us to guide our moral and practical life, and for organising knowledge. They are interconnected parts of the knowledge of the world, which "serves to procure the *pragmatic* element for all otherwise acquired sciences and skills, by means of which they become useful not only for the *school* but rather for *life* and through which the accomplished apprentice is introduced to the stage of his destiny, namely, the *world*"<sup>80</sup>. This is as Foucault maintains to make room for "a cosmopolitical perspective with a programmatic value, in which the world is envisaged more as a republic to be built than a cosmos given in advance" (Foucault, 2008: 33). Therefore, we need to connect geography (object of external sense), anthropology (object of inner sense) and pedagogy (the way to humanity) to a fourth grounding: the temporal or narrative dimension of human development as Kant sees it — a *teleological* notion of history. This because, in a Kantian perspective, we need to examine how the human being has been and how he now is, as well as what he can become by virtue of his vocation. As the human being is not simply what he is, but what he makes of himself through education (by which he learns to use his reason publicly), his need for education offers a grounding for anthropology and geography, which can be conceived as educational means. The human being's destiny can be understood by studying his evolution through education and through time. To bring these educational issues forward is the merit of critical philosophy. However, the problem is Kant's

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<sup>80</sup> Kant, DRHB; 2:443.

pragmatic answers to these issues, which are given from a racist, Eurocentric and colonial perspective. This perspective makes it all too easy for Western imperial powers to present themselves as advocates of universal education, democracy, freedom, and goodness, while in reality oppressing others judged as uneducable. Western imperialism started ongoing wars in Afghanistan and Iraq in the name of universal goodness against evil.

In sum, as Friedman<sup>81</sup> maintains, Kant was struggling “to adjust” notions of nature, pedagogy and the human being to “the profound intellectual and spiritual upheavals of the scientific revolution and its aftermath”<sup>82</sup>. He indeed alienates the human being from nature and the world of everyday experiences by sharply distinguishing it from the world and scientific experience. He then gave primacy to pedagogy, the human being and the world, as they are defined by Newton’s scientific systems as an outcome of the regulative use of reason outlined in the transcendental dialectic. In my view, this was a turning point in Western educational thought, a paradigmatic revolution in education. This turning point is still decisive for the conditions of the possibility for education to be intercultural, antiracism, decolonial or otherwise.

In Kant, education is connected to science in two ways: 1) in a narrow sense, he wanted to make pedagogy a scientific discipline among other disciplines like anthropology, geography and history; and 2) in a broader sense, he wanted to shift the total framework of education from ecclesiastical education or rational theology to a scientific one. In the first sense, education is a science of teaching (science education) within curricula and a school framework. In the second sense, it transgresses the school boundaries and becomes the frame of the Kantian cosmopolitan society, a mode of subjectivity through which the “accomplished

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<sup>81</sup> 2013.

<sup>82</sup> Friedman, 2013, p. X.

apprentice is introduced to the stage of his destiny, namely, the *world*<sup>83</sup>. In his second *Critique*, Kant emphasises the importance of science for teacher education, commissioned to function as guides for everyone towards wisdom through science:

Science (critically sought and methodically directed) is the narrow gate that leads to the *doctrine of wisdom*, if this is understood not merely what one ought *to do* but what ought to serve *teachers* as a guide to prepare well and clearly the path to wisdom which everyone should travel, and to secure others against taking the wrong way; philosophy must always remain the guardian of this science, and though the public need take no interest in the subtle investigation, it has to take an interest in the *doctrines* which, after being worked up in this way, can first be quite clear to it.<sup>84</sup>

The emergence of scientific education was a historical paradigm shift away from knowledge based on revelation towards profane knowledge. Kant asserts that his critical philosophy is “a perfectly new science, of which no one has ever even thought, the very idea of which was unknown”<sup>85</sup>. Putnam, Pippin and Solomon<sup>86</sup> are among the major philosophers who emphasise the revolutionary nature of Kant’s philosophy. Some scholars suggest Kant’s *Critique of Pure Reason* as the starting point of modern philosophy and his time as the starting point of modernity proper<sup>87</sup>. Such a revolution was the result of changed circumstances that shifted from ecclesiastic education (the dominant educational paradigm of the Middle Ages) to a modern secular education. Indeed, scientific education appropriated some principles of humanism, namely the educational ideology of the Renaissance. As generally happens, this paradigm shift did not

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<sup>83</sup> Kant, DRHB, 2:443.

<sup>84</sup> Kant, CpPR, 5:163.

<sup>85</sup> Kant, PFM, 7:262.

<sup>86</sup> Putnam, 1978, Pippin, 1997 and Solomon, 1988.

<sup>87</sup> Braver, 2007.

happen overnight. Rather it was preceded by long-standing struggles between competing educational ideals, where the new ideals challenged the old ones before the shift became inevitable. Furthermore, there was an appropriation process after the shift, where many elements of the old paradigm were appropriated and used in new forms. The main shift was that of sacral knowledge to profane knowledge and to reason as a self-legislative source of knowledge and judgement. This was also a rediscovery of antiquity as a source of knowledge and inspiration worthy of being imitated. The important point in this regard is that the kinship between the modern age and antiquity was reported as a linear and monochronic route of development, to the exclusion of non-European sources of knowledge and inspiration. This discovery was common between humanism, the educational ideology of the Renaissance and the Enlightenment. The notion of *Humanitas* was the central theme of humanism, the highest cultivation of humanity in accordance with ancient Greek and Roman ideals. And this was possible through education, a common concern of humanism and the Enlightenment. Europe was then constituted as self-sufficient geopolitically, and in perpetual strife to conquer the rest of the world in the name of faith, humanity, truth, and knowledge. In retrospect, this style of thought not only led to the dehumanisation of others but also to the dehumanisation of Europe as a global oppressor.

As it was Kant who established the idea of education as a scientific discipline, as well as framed by a scientific style of thought, understanding scientific education demands a proper understanding of his conception of science. The Kantian notion of science links backwards to the classical and medieval eras, as well as referring forwards to the prevalent notion of science presently, while his own context was that of emerging disciplines like anthropology, to which he contributed substantially. As such he was working in a situation that has had great importance for the modern project. Therefore, his views of science and education, and their relationship, have far-reaching implications. As Kant's influence prevails in analytic (with emphasis on his idea

of the universal) and continental (with a view to his hermetical views) traditions of thought, his standpoint can rightly be conceived as representative of the ways in which Western modernity might be complicit with or offer means for overcoming colonial and racist oppressions.

Postulating a scientific idea of education, Kant tries to bring clarity and distinctness to this idea, its aims and means. He also tries to make it applicable in experiential reality. This is done as a part of a wider enlightening mission by critical philosophy or science. In order to achieve all of these things, he brings education into “the secure path of science” as distinct from that of art. This is indeed a paradigm shift. For Kant, art was related to human skills, the ability to perform universal principles or make things in contingent empirical situations (what we actually do or know how)<sup>88</sup>, while science was related to universal principles or “theoretical employment” of reason to the formal or objective principles (what we ought to do). Aesthetic satisfaction is related to inclination, and while the intellectual belongs to the realm of freedom or acting in accordance with the rules of reason, the former signifies the lack of freedom related to the sensible realm<sup>89</sup>. Gaining freedom means to bring the diversity of sensible life under predetermined rational forms or principles. This is to put conformity above and prior to diversity, since for Kant universality or objectivity is identical to formality (maxims, what we ought to do). At the same time, this is a mechanism for establishing hierarchies of superiority and inferiority — a mechanism of classification and systematisation — subordinating the diversity of empirical cognition to a single clear and distinct idea and making this rational idea valid for everyone regardless of contexts of life. As will be elaborated later, on this basis Kant classified peoples and cultures and made some superior to others.

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<sup>88</sup> Kant, CJ, 20:304.

<sup>89</sup> Kant, CpPR, 5:117–118.

The idea of a scientific education becomes clearer when we read it against the background of Kant's idea of science as systematic unity. He maintains "systematic unity is what first turns common cognition into science"<sup>90</sup>. According to Kant, a system is "the unity of the manifold cognitions under an idea. The idea is reason's concept of the form of whole insofar as this concept determines *a priori* both the range of the manifold and the relative position that the parts have among one another"<sup>91</sup>. Systematic unity is his solution to the diversity of cognition, contingency of art and manifold nature of human conditions. It is the starting point and the end product of his normative endeavour to establish universally valid principles, laws and rules for everyone. This conformity of ideas and flight from diversity towards conformity becomes much more problematic when it comes to the relationship between different peoples and continents.

Before we discuss the practical and educational implications of this view of science, it is necessary to revisit Kant's view of methodology of science, as it has implications for education. Kant writes: "what we call science cannot arise technically, i.e., not because of the similarity of the manifold [parts in it] or because of the contingent use of cognition in *concreto* for all sorts of optional external purposes; but it can arise only architectonically, on account of the affinity [of its parts] and the derivation [of these parts] from a single supreme and internal purpose that makes the whole possible in the first place"<sup>92</sup>. Decisive for the Kantian overall project, this view of science partly indicates a methodology, elaborating that this method should be based on principles of reason: "science" requires "a *method*, i.e., a procedure in *accordance with principles* of reason, by which alone the manifold of a cognition can become a *system*"<sup>93</sup>. It is an architectonic method as opposed to a method of analogy (or

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<sup>90</sup> Kant, CPR, A832/B860.

<sup>91</sup> Kant, CPR, A832/B860.

<sup>92</sup> Kant, CPR, 834/B862.

<sup>93</sup> Kant, CpPR, 5:151.

induction). It is not the similarity of parts that creates unity, coherence and systematicity. The need is rather an intrinsic purpose, a unifying idea and a rational style of thought consistent with it, since unity is crucial. Most importantly, in an educational context, the manifold's unity is seen in the light of the internal purposefulness of the future of humanity embedded in human destiny. It is related to the Kantian overall story of human progress from its past and present states of diversity towards perfection and conformity under moral laws, the *telos* of which is predetermined by nature and reason as the highest good and governance due to "civil constitution"<sup>94</sup>. To make education scientific means to subordinate it to such a predetermined guiding idea, an inner purpose and a style of thought, ultimately to make it part and parcel of an overall story. The starting point is epistemic, as for Kant the knowing subject is at the centre of cognition and prior to the acting subject. Further, this subject is transcendental and independent of context of life. Scientific education becomes the way to emancipation and science becomes the emancipatory form of knowledge.

The unifying, guiding and regulative idea was that of human perfection. The rational idea of human perfection or the form of the whole integrates education into the overall Kantian critical project for emancipation of humanity on the one hand, and determines *a priori* its position within this project on the other. It also brings systematic unity into education and makes it scientific in order to use it as means for the moralisation of human beings. Moreover, Kant does all of these in the light of a universal purpose, which is valid for everyone regardless of contexts of life. The problem with this style of thinking is that it works through exclusion and subordination rather than through equality, inclusion, dialogue, and affirmation of the diversity of perspectives and peoples. By rendering his own position of a system of ideas as all-encompassing and self-sufficient, Kant renders the others superfluous and in need of assimilation into

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<sup>94</sup> Kant, APV, 7:327.

this system. This magnificent overarching project of classification, standardisation and subordination to abstract ideas and principles had a price.

*Education, the way to “our” happiness: a colonial dividing line*

In the previous section, the historic basis of the idea of scientific education in Kant’s epistemology was explicated. This section will explore practical implications of this notion of education. Consistent with his overall style of thought and in accordance with his architectural methodology, Kant’s project first starts from a totalising idea of education and afterwards tries to apply it to the diversity of people and contexts. In *What Does It Mean to Orientate Oneself in Thinking?* from 1786, he elaborates on the suitable use of ideas “in the experiential world” in order “to give objective reality” to their unifying function<sup>95</sup>. Otherwise they will remain merely ideals without any relevance for educational practice. It is a concern of theoretical (conditioned or applied consciousness) and practical (unconditioned or pure logical consciousness) use of reason. In accordance with the Kantian style of thought, a unifying idea of education is scientific. It is worth repeating that the idea of education always precedes its practice. “An idea”, Kant maintains, “is nothing other than the concept of a perfection which is not yet to be found in experience”<sup>96</sup>. Thus, the idea of education sets boundaries within which one makes oneself worthy of happiness and realises the hope of happiness so central for Kant’s teleological historiography. The idea of educated human beings fully reaches the purpose of their existence, which is freedom or living in accordance with universal rational principles. However, there is a problem: the diversity of ways of life and rationalities. Kant maintains: “For how differently do people live! There can only be uniformity among them if they act according to the same

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<sup>95</sup> Kant, WMOT, 8:139.

<sup>96</sup> Kant, LP, 9: 444.

principles, and these principles would have to become their second nature”<sup>97</sup>. The task is then to bring humanity under the same principles and educate within the boundaries of the same pure reason. The question is who the subject of this rational undertaking is and who is subjected to it? What criteria determine the dividing line between the two?

Faithful to his overall methodology, Kant assumes a normative idea of “we” steadily progressing towards perfection. We can then ask, as Robert Louden suggests, “Who is the ‘we’ that is progressing toward perfection?”<sup>98</sup> Most importantly, we can ask, what kind of relationships are there between this “we” and its others? What is its relation to colonial classification of peoples into conquerors and conquered, oppressors and oppressed? We also need to bring to the fore the implications of such a “we” for capitalism and the neoliberal market economy.

In Kant, human perfection is predestined and universal. It is achievable by the human species rather than by individuals. Generally, Kant operates with the unifying idea of humanity (related to rational imperatives or laws of freedom) and not with that of the individual with its empirical diversity. For him, humanity is a universal idea based on formal principles and acting accordingly. Education becomes a form, bringing unity to the manifold peoples and diversity of ways of life rather than affirming them. This is done at the price of extinguishing some of the undeveloped manifestations of human life. Kant is aware of the price of his educational project in terms of human suffering, wars and the damage they cause. However, he sees war and cruelties as the cunning of nature in achieving its purpose<sup>99</sup>. Some have to pay the price for human perfection — those who are at the lower levels of development. Kant clearly states that “Humanity is at its greatest perfection in the race of the whites. The yellow Indians do not have a meagre talent. The Negroes are

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<sup>97</sup> Kant, LP, 9: 445.

<sup>98</sup> Louden, 2014a: 102.

<sup>99</sup> Kant, IUH, 8:24–25.

far below them and at the lowest point are a part of the American peoples”<sup>100</sup>. Accordingly, Kant departs from the notion of a white rational “we” as the starting point and end product of education. Geopolitically, he assigns a leading position to Europe by virtue of it being the pinnacle of development. Kant repeats what Aristotle once, citing the poets, said of non-Greeks: “It is meet that Hellens should rule over barbarians”<sup>101</sup>, and maintains, in a modern vein, the idea that Europe or “our part of the world” will “give laws to all the others”<sup>102</sup>. As Simmons<sup>103</sup> maintains, Kant offers no legitimate basis or plausible account of how European colonial powers might legitimately legislate for populations and territories outside Europe, govern them, seize their natural resources, and control their territories. Even if we agree that the Western colonial powers were just, it gives them no right to impose their legislation on others, against their will and without any dialogue with them. Kantian cosmopolitanism then becomes colonial and his notion of universality becomes confused with imposing uniformity on the world. Kant tried to make a Eurocentric image of humanity globally valid, as if rational thinking was an exclusive European ability and granted Europe legitimate domination. As Allen <sup>104</sup> observes, this is the complicated question of the relationship between enlightenment rationality and domination. It seems that Kant sees natural bonds between colonial domination and rational thinking. However, there is no natural bond between these two phenomena. Colonial domination was a result of a contingent notion of rationality as it emerged in Europe in the 18<sup>th</sup> and 19<sup>th</sup> centuries, ultimately specific historical and social conditions intertwined with bourgeois power and the wish to dominate inner and outer nature. Consistent with Kant’s architectonical method, in this notion of rationality, the idea of reason is the legislative power within any rational individual and it brings unity to their

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<sup>100</sup> Kant in Eze, 1997: 63.

<sup>101</sup> Aristotle, *Politics*, 1252b.

<sup>102</sup> Kant, IUH, 8:30.

<sup>103</sup> Simmons, 2016.

<sup>104</sup> Allen, 2016.

faculties. The white man, in the same manner, is the legislative power among different races, cultures and continents, and subdues them to a systematic unity by his own colonial law. While for the white man it is moral law that signifies freedom, for colonised people it is subordination to colonial law.<sup>105</sup>

Using the idea of a white “we” as the unifying idea of human diversity, Kant equates human perfection with whiteness and subordinates other races to this race. The diversity and heterogeneity of peoples is reduced to one homogenised notion of humanity and identified as Europeans. He creates humanity after an image of white people; his cognitive racism takes on biological and ontological dimensions.

### *Kant and educational colonialism: the uneducable other*

As was mentioned, Kant sees humanity as an integrated whole under the law of pure reason and freedom to use one’s reason publicly, achievable through a universally valid notion of education. Education for Kant is cosmopolitan, as the human being is destined to this end. Reflecting on the diversity of humanity race, he writes:

It is a multitude of persons... who cannot *do without* being together peacefully and yet cannot avoid constantly being objectionable to one another. Consequently, they feel destined by

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<sup>105</sup> Some scholars of Kant like Lea Ypi and Paul Kleingeld (2015) try to purge Kant’s later works from colonialism and racism, and make it valid that in the later phase of his philosophical life, Kant abandoned his early hierarchical understanding of races and colonialism. Faithful to Kantian style of thought, one can, however, argue that his philosophy is a systematic “whole” from the beginning to the end, consistent with his view of the highest good, as something that fulfils pure or practical reason’s quest for human perfection through education as a science. Generally, in Kant, the legislative power of reason, predetermined freedom through moral law, and what human beings make of themselves as rational beings, are distributed unequally between races.

nature to [develop], through mutual compulsion under laws that come from themselves, into *cosmopolitan society* (*cosmopolitismus*) that is constantly threatened by dissolution but generally progresses toward a coalition.<sup>106</sup>

However, anthropological and geographical groundings stand in the way of such an education, as they reveal local diversities that challenge a globally uniform education. Kant saw the solution to the problem of local diversity of different peoples and homogenising imperatives of pure reason through a pedagogical perspective linked with history. In other words, diversity of peoples and perspective can be subordinated to unified principles through education. Kant was interested in educability in accordance with the principles of a Eurocentric notion of rationality and developmental temporality. To embrace Eurocentric values was considered the predetermined aim of nature; that is, Kant classified humanity through a Eurocentric perspective as the very paradigm of universality. Achieving cognitive capacities and becoming cosmopolitan were related to skin colour and geography.<sup>107</sup> Kant makes education equivalent

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<sup>106</sup> Kant, APV, 7:331.

<sup>107</sup> Justin E. H. Smith (2015) sees crucial connections between rationalisation of racial exploitation and the scientific desire to classify in the early modern period. According to him, ontologisation of human difference is related to the scientific style of thought, where the human becomes subject to natural laws like other things such as trees and minerals. Human types became “natural kinds” in scientific taxonomy; the human as part of nature. In the modern age, “Ethno-prospecting” was linked to “bio-prospecting” of colonial exploration (2015; 11–12). Smith highlights Eurocentric structuring of the notion of philosophy, as well as the contingent emergence of taxonomies. Smith regrets the destruction of an age-old universalism about human nature, as was defended by thinkers such as Augustine, based on a belief in the transcendent essence of the human soul. Such a view of humanity, Smith believes, did not conceptualise human beings as natural beings. Consequently, humans were not subjected to classification in terms of a naturalistic taxonomy, as became common in the modern age. In my understanding, this account of racism seems itself Eurocentric. On the other hand, in Kant it was not the collapse of universalism about human

to the assimilation of the others into the European way of life, explaining:

It is also observable in savage nations that, though they may be in the service of Europeans for a long time, they can never grow accustomed to the European way of life. But with them this is not a noble propensity toward freedom, as Rousseau and others believe; rather it is a certain raw state in that animal in this case has so to speak not yet developed the humanity inside itself.<sup>108</sup>

In this passage, like in the *Critique of Pure Reason*, the starting point is the distinction between nature (everything that is in accordance with the natural law) and freedom (what should be and according to the moral law), corresponding to “savages” and “the European way of life”, respectively. Non-Europeans are defined as being part of nature, rude, ignoble, uneducated, and savage. These two domains must, however, come together in a single notion of humanity: the European way of life. As in Kant, the animal or passive part of humanity can legitimately be dominated by its rational or active part, and the domination of native populations becomes both legitimate and a noble mission<sup>109</sup>. Humanity is classified through a dividing line between educable and uneducable peoples. As a scientific discipline, education became connected to the colonial rules and power, where the colonised were obliged to recognise themselves as the subject of this uneducability. As natives of other continents were deemed uneducable in accordance with the “European way of life”, they could not govern themselves. Colonial masters had to educate and govern them. Imperial and expansionist notions of education and governance were sanctioned, through which non-Europeans could make themselves worthy of autonomy. A

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nature that was the problem, rather the other way around. Further, in Kant, the animality of humans belonging to nature was not a problem; nature had a noble purpose for humanity – human perfection. Indeed, education was to become consistent with nature. The problem was rather educability or the lack of this capacity.

<sup>108</sup> Kant, LP, 9:442.

<sup>109</sup> Harvey, 2009, p. 39.

chronological gap emerged between the West and the rest of the world. Some historical time of development under colonial rule had to pass before the colonised could be considered prepared for autonomy. As Quijano observes, “All non-Europeans” are “considered as pre-European and at the same time displaced on a certain chain from the primitive to the civilized, from the rational to irrational, from traditional to modern, from the magical-mythical to the scientific. In other words, from the non-European/pre-European to something that in time will be Europeanized or modernized”<sup>110</sup>. Here, history functions as an ideological justification for ongoing colonialism and rationalisation of gradual assimilation of other cultures into European culture. This narrative veils the fact that Europe has been the source of colonialism, systematic slavery, scientific racism, the holocaust, and neocolonial injustices. In this view of progress, the West has taken on an educational mission instead of an outmoded civilising mission in a way that underwrites neocolonialism and imperialism.

This is a logic of coloniality, where the right to be divergent or different in equality is denied. Emancipation or development from animality to humanity is considered equivalent to Europeanisation. Another aspect of this same problem is autonomy and heteronomy, or freedom (under moral laws) and dependency (under the diversity of nature). Uneducable humans were not worthy of autonomy but disposed to be dependent and heteronomous. Europe became not only the measure of cognition and truth but also of freedom and autonomy, and the inferiority of the other was justified by reference to their not being educable. In order to uphold this divide, military, political, religious, and economic forms of violence were coupled with cognitive violence. There was a shift of modes of oppression as they became more and more sophisticated and hidden. Kant pioneered colonisation of education, knowledge and culture by making Europe the territory of education and the others uneducable. He

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<sup>110</sup> Quijano in Allen, 2016, p. 21.

made educable people superior to uneducable ones. Cognitive colonialisation of humanity was naturalised.

Kant gives expression for a shift in the colonial mindset, where it is not just conversion to Christianity or economic exploration that is the main colonial concern as in the earlier stages of colonialism. At stake is also conversion to scientific values. Colonialism gains a scientific dimension.<sup>111</sup> From this perspective, the cognitive capabilities of the other are denied and their knowledge perspective is disqualified. This was to introduce new techniques of racist and colonial subordination, articulated in epistemic terms. These techniques were, however, based on the same matrix of classification of humanity of colonial conquerors and conquered. People who were not ready to submit to the Western notion of rationality were considered uneducable beings. The otherness of the other was dehumanised and made inferior to Europeans, and object to their colonial and racist exploitation. The others should become like the Europeans in order to become human. As being human equated to being educable, the uneducable were excluded from being human. Kant rendered the others as not educable by nature, which could mean that they could never reach the stage of human perfection. Scientific knowledge and the concomitant educational paradigm became

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<sup>111</sup> For instance, in *Two Treatises of Government*, John Locke departs from the creation of property and its preservation as central to England's colonial settlements in America. Locke uses the discourse of natural law rather than that of science to answer the questions raised by colonisers' right to colonised soil. Kant brought together discourses of science, reason and nature, and considered them as striving after the same purpose: human perfection. In the scientific stage of colonialism, colonial scientists showed a new pattern of behaviour. The British colonial explorer James Cook (1728–1779) was, for instance, equipped with questionnaires for scientific studies of other peoples and cultures (Urs Bitterli, 1989). The hierarchical notion of educability was formed with the white Western Christian culture as the pinnacle of human development and destiny. Emancipation was a move away from empirical diversity towards an abstract universality.

mechanisms of colonial control and organisation of labour, a means for racist oppression.

### *Kant and scientific racism*

Up to now the focal point of my investigation has mainly been Kant's division of humanity along colonial lines. In this section, my attempts are aimed at shedding light on his hierarchical division of humanity along skin colour. The body of literature on Kant and racism is growing. This literature unveils a colonial, racist and Eurocentric view of humanity beneath the established view of Kant as enlightened, egalitarian and cosmopolitan. He believed in insurmountable differences between races and corresponding differences in their ability to become autonomous or reach human perfection. The shift from earlier views of human diversity to that of Kant was a shift from a pre-scientific understanding to a scientific one, where systematic classification of humanity along racial lines became crucial.<sup>112</sup>

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<sup>112</sup> Justin E. H. Smith (2015) sees crucial connections between rationalisation of racial exploitation and the scientific desire to classify in the early modern period. According to him, ontologisation of human difference is related to the scientific style of thought, where the human becomes subject to natural laws like other things such as trees and minerals. Human types became "natural kinds" in scientific taxonomy; the human as part of nature. In the modern age, "Ethno-prospecting" was linked to "bio-prospecting" of colonial exploration (2015; 11-12). Smith highlights Eurocentric structuring of the notion of philosophy, as well as the contingent emergence of taxonomies. Smith regrets the destruction of an age-old universalism about human nature, as was defended by thinkers such as Augustine, based on a belief in the transcendent essence of the human soul. Such a view of humanity, Smith believes, did not conceptualise human beings as natural beings. Consequently, humans were not subjected to classification in terms of a naturalistic taxonomy, as became common in the modern age. In my understanding, this account of racism seems itself Eurocentric. On the other hand, in Kant it was not the collapse of universalism about human nature that was the problem, rather the other way around. Further, in Kant, the animality of humans belonging to nature was not a problem;

Robert Bernasconi maintains that “Kant can legitimately be said to have invented the scientific concept of race insofar as he gave the first scientific definition of it”<sup>113</sup>. By inventing the scientific notion of race and establishing a scientific framework for human diversity, Kant created a new racial paradigm. Bernasconi writes, “Kant opened up a new space for thinking: he took it into new territory”, where “those who came after him worked in the space he opened up”<sup>114</sup>. Bernasconi contends that the fact that Kant was a racist is relevant to Kantian themes like cosmopolitanism. Harvey endorses this approach and maintains that Kant initiated the idea (which later had a very unfortunate history) that the question of race should be put upon a purely scientific footing<sup>115</sup>. John Gray also shares this view, wherein he sees Kant as a philosopher “who more than any other thinker gave intellectual legitimacy to the concept of race. Kant was at the forefront of the science of anthropology that was emerging in Europe and maintained that there are innate differences between the races. While he judged whites to have all the attributes required for progress towards perfection, he represents Africans as being predisposed to slavery”<sup>116, 117</sup>. Gray quotes Kant’s *Observations on the Feelings of the Beautiful and the Sublime*<sup>118</sup>, where he writes, “The Negroes of Africa have by nature no feeling that rises above the ridiculous”. Kant joins Hume for asserting the view that:

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nature had a noble purpose for humanity – human perfection. Indeed, education was to become consistent with nature. The problem was rather educability or the lack of this capacity.

<sup>113</sup> Bernasconi, 2001, pp. 146–47.

<sup>114</sup> Bernasconi, 2001, pp. 146–47.

<sup>115</sup> Harvey, 2009, p. 25.

<sup>116</sup> Gray, 2007, p. 61.

<sup>117</sup> As Adorno and Horkheimer observe, cosmopolitanism is compatible with colonialism and racism.

<sup>118</sup> Kant, 1764.

Mr. Hume<sup>119</sup> challenges anyone to adduce a single example where a Negro has demonstrated talents, and asserts that among the hundreds of thousands of blacks who are transported elsewhere from their countries, although very many of them have even been set free, nevertheless not a single one was ever been found who has accomplished something great in art or science or shown any other praiseworthy quality, while among the whites there are always those who rise up from the lowest rabble and through extraordinary gifts earn respect in the world. So fundamental is the difference between these two human kinds ...<sup>120</sup>

The asymmetrical power relations between cultures and the structure of superiority /inferiority between races received scientific legitimacy through Kant. The classification applied in Kant's anthropology was not separated from his major critiques, because his oeuvre built up a systematic unity under a unifying idea, an internal purpose and a single architectonic method. What makes Kant relevant to such a degree is the contradictory nature of his notions of cosmopolitanism, freedom and autonomy, his talking of universally valid principles and imperatives on the one hand and limiting them to the provincial interests of white Europe on the other hand. Kant contributed hugely to a racist and colonial style of thought (coloniality)<sup>121</sup> and to the logic behind racism that has become decisive in our times. The Peruvian sociologist Anibal Quijano<sup>122</sup> maintains that the modern classification of humanity along the racial axis became linked to another axis of classification, namely waged and

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<sup>119</sup> Kant refers to Hume's earlier claim that "I am apt to suspect the Negroes, and in general all other species of men to be naturally inferior to the whites. There never was any civilised nation of any other complexion than white, nor even any individual eminent in action or speculation".

<sup>120</sup> Kant, OFBS, 2:235.

<sup>121</sup> Coloniality is distinct from colonialism. Colonialism signifies a historical period, when Western powers directly administrated colonised parts of the world. Coloniality is the logic behind colonialism, which has been and is much more persistent than colonialism. It has become part and parcel of the tacit infrastructure of culture, education and functions beyond colonialism in the present day.

<sup>122</sup> Quijano, 2000.

unwaged labour, as well as control of labour, its resources and products. Racial divides thus received economic significance, and racism and capitalism became interconnected. Therefore, Kantian ideas did not remain limited to an anthropological classification of humanity, but gained economic significance and became parts of the capitalist arsenal. Kant's cosmopolitanism was a part of his overall project of universalising white, capitalist and colonial Europe. He advocated for provincial interests of white Europe as the starting point of his universalism as though they were the interests of humanity. Freedom from colonial hierarchies of power requires a critical engagement with Kant, and "provincialising" him alongside Europe.

## **Problematism of scientific education's actuality**

Up to now the focal point of this essay has been to unveil the colonial, racial, Eurocentric and capitalist features of the generative context of scientific education. I have attempted to show that the aims that scientific education set itself, the kind of problems it tried to solve, and discourses underpinning it were possible and made sense in a context of colonialism and Eurocentrism. However, the critical task this essay sets itself relates education's past and present to its future aims. The difficult task is to focus on the contingency and complexity of our educational present, to discern continuities and discontinuities between assumptions of educational thought in the generative context of scientific education and that of its actuality in order to impact its future development. The need is to carefully identify those educational ideas, postulates and practices that are to be problematised, re-examined, reconstructed, and transformed. Questions to be asked are: are colonial postulates and racist constitutive elements of scientific education disrupted or can they continue to work invisibly? How can we release the future of education from the burden of the past? To begin with, one of the main assumptions for outlining answers to these questions is that colonialism as a historical period is now over. There are very few colonies. Former colonies are now governed by nation states,

mostly bleak copies of the Western democracies, governed by a Westernised educated elite, faithful to Western cultural and educational hegemony (Kantian in this sense). However, colonialism was not just a period of time, but most importantly it was a configuration of colonial power and practices, an ethos and a way of thinking, acting and talking. It had its own style of thought, patterns of behaviour and language. While the epoch is over, the logic behind colonialism or coloniality of domination, colonial ethos and postulates of its educational thought are still at work. The unequal political, economic and cultural relationships between former colonial masters and former colonies, as well as the division of labour along racial and colonial lines, are still the rule (Wallerstein & Quijano, 1992). Free market capitalism and its rationality has become more global as the only mode of production and distribution of goods in a worldwide market. Eurocentrism has become more sophisticated and hidden in figurative and discursive regimes of knowledge/power and practice. The same can be said of racism, as racial differences have become ontologised as racialised bodies have become disposable and unworthy of being mourned. As Butler<sup>123</sup> puts it: world populations have been divided into “grieveable and ungrieveable lives” along racial and geopolitical lines. These phenomena form basic aspects of the neoliberal world system. Scientific education is now a part of these global systems and works in tandem with global epistemic division of labour. The questions above can be investigated through a movement back and forth between the Enlightenment and neoliberalism as the main points of reference.

Archaeological and genealogical investigations of scientific education lead us back to the Enlightenment, especially to its Kantian versions, and its idea of emancipation through the power of reason. Acquisition of scientific knowledge becomes the main educational task. These investigations also reveal the emergence of scientific education from the same cultural and social context

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<sup>123</sup> Butler, 2009.

as that of slavery, colonialism, Eurocentrism, and capitalism. In fact, these intellectual, social, historical, and economic practices shaped modern Western subjectivity and its relationships with itself (its ethics), with the world (its knowledge and truth), and with the other (its power relations). However, this constitutive role has not been acknowledged in mainstream narratives of education. Genealogical analysis is a matter of shedding light on the gap between the colonial way of conducting knowledge production and transference and established discourses of emancipation through education and rational knowledge. As Western subjectivities emerged from a world of visible and invisible colonial, capitalist and racist practices, these practices could not but become natural as time passed; they become implicit parts of daily educational procedures. My attempts in the remaining part of this essay are aimed at reconceptualisation of knowledge, education and emancipation through questioning this naturalness from a position outside the colonial field of experience. The following pages briefly outline the basic principle of such reconceptualisations.

I connect these analyses with how we through different educational strategies might demolish structures of domination and set ourselves free of racial and colonial dominations. From this perspective, the educational practices I am arguing for can be conceived as a counter-education. This is an attempt to reveal the ways in which the processes whereby colonial oppressors disciplined and governed the colonised have been closely connected to procedures and processes of identity constitution and knowledge production and transfer. Through these processes, the colonised and racialised have become objectified, pacified and made the object of colonial knowledge production.<sup>124</sup> Worth mentioning is that as critics of the

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<sup>124</sup> “The darker side” of European modernity has already been subject to extensive studies by intellectuals from the decolonial camp. Here, I am focused on the darker side of modern education: the interconnectedness of science, education and the colonial mode of subjectification and governmentality. The critical task is to shed light on

Enlightenment, we need to have the ability to not surrender to what Foucault calls “intellectual blackmail of being for or against the Enlightenment”<sup>125</sup>. The most interesting approach to this multidimensional notion lies somewhere in between: seeing its virtues and vices. The same can be said of Kant. Rather than a wholesale acceptance or refusal of the inherited educational background inspired by the Enlightenment, we need to establish a playful relationship between transforming and recognising it. This is to discriminate between resources it handed down from harms it caused. Through contextualising, historicising and critically examining scientific education, we reveal its transitory and temporal nature and activate creative and critical forces that will transform it for the better.

### *Scientific education and neoliberalism*

As mentioned earlier, scientific education emerged and developed as an integrated part of the Western modernity, underpinned by an abstract notion of the transcendental subject as the presupposition of all knowledge and experience and the notion of progress towards human perfection. It was invented as the best way towards human freedom and happiness, considered as an autonomous life constrained by moral imperatives of pure reason. However, these ideas were contradictory, since distribution of educability and recognition of capabilities to achieve human perfection, autonomy and happiness took place along racial and colonial divides. Scientific education became a means for subordination and abolishing the will to be different. Scientific thought worked systematically for the homogenisation of the world’s population in accordance with imperatives of hegemonic European reason. It contributed to the suppression of

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this layer of the system of education in order to free ourselves from its dehumanising effects. Such a freedom presupposes that the colonised become the subject and agent of their deeds, thoughts, discourses, knowledge, and being.

<sup>125</sup> Foucault, 1984.

manifold ways of life through the global spread of the Western way of life. Nowadays, scientific education enjoys global domination alongside the neoliberal unjust division of epistemic labour between the global South and North. There are continuities and discontinuities between the generative context of scientific education and its neoliberal actuality.

The Kantian educational theory was unified under the guiding idea of human perfection, informed by transcendental uniformity and the discriminatory principle of educability along racial and colonial divides. Being part and parcel of Enlightenment heritage, these ideas of humanity have not disappeared overnight. They have instead changed shape and continue to work as part of invisible presumptions of education. Here, I choose to trace genealogical ties between three interrelated traits of the Kantian educational paradigm and the actuality of education in our time, since they have become part and parcel of the tacit infrastructure of education. First is Kant's understanding of freedom as rational choice. Second is his emphasis on the transcendental knowing subject instead of acting subject, on the universal principles of reason as the starting point of cognition and education (cognitivism) instead of specific contexts of knowledge production and dissemination. Third is his obsession with systematic classification as the basis of true knowledge or science. Currently, these discourses have changed form and function, and we need to trace them in new ways and in unexpected places. Rather than being abandoned, colonial and racist ideas are now intertwined with notions such as *homo economicus* (a rationally calculative animal), rational choice theory, human capital, and entrepreneurship as discursive tools of the neoliberal regimes of practice. Most obviously they are at work in racial, ethnical, sexist, and class discrimination, and in systematisation, bureaucratisation and institutionalisation of education for the benefit of hegemonic Western culture, and moreover in uncritical, systematic and mass initiation into scientific knowledge as the authoritative source of cognition, as well as in

expansion of market rationality into education and into all spheres of life.

Generally, nowadays economics and the economic man occupy centre stage and oppress the others in the name of global values. The Kantian idea of educability for human perfection is now transposed to education for employability, and education has become an investment in human capital. However, the paradigmatic rational and employable subject continues to be white. Racism, racial and colonial division of labour continue to be endemic to a neoliberal world system, since societies are organised on the basis of social classification of the world's population around the idea of race in ways that white supremacy is preserved. As an element of human capital, skin colour is still limiting for non-whites and to overcome it is an investment. As Foucault observes, these limits are to be overcome through technological interventions like plastic surgery or genetic engineering that make it possible to transform one's initial investment. The neoliberal system is not limited to organisational principles of the production and distribution of commodities. It has a guiding idea of humanity and tries to shape humanity in accordance with this idea of human perfection — that of *homo economicus*. To realise this idea in the first place, neoliberalism homogenises human relationships by quantifying them. It reduces the diversity of the lifeworld to the single perspective of economic rationality and tries to control life through universal principles of the free market, like money. Economic self-interest and competition replace the richness of human relationships and the diversity of practices. It totalises the manifold human potentialities in terms of economic competition and aims to foster the human being as a competing animal.<sup>126</sup>

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<sup>126</sup> A reference to Foucault makes the neoliberal image of humanity easier to grasp. He sees neoliberalism as a shift from exchange as the basis of society (as classical liberals like Adam Smith considered) to competition (Foucault, 2008: 12). Consequently, “The model neoliberal citizen is one who strategises for her or himself among various social, political, and economic options, not one who strives with others to alter

Guided by principles of rational choice and market-based principles of cost-benefit calculation, the neoliberal subject is supposed to be an individual with free will and the site of moral responsibility for orientating to the exclusion of all other social interests. Consequently, neoliberal subjects are no more a political force for change, since they are focused on their own self-interests rather than being interested in organised collective endeavours.

We should justifiably worry about the instrumental use of education by consumerism and free market capitalism, as human happiness has been distorted to consumption. Neoliberalism has colonised science, education and lifeworld as different sectors for investment. As Dewey already stated, “the main directions of science during the past hundred years, increasingly so in the last century, have been set, indirectly or directly, by the requirement of industry carried on for private profit”<sup>127</sup>. Neoliberalism also imposed itself as the global paradigm of rationality. Through conflation of education with employability and consumption with human happiness, education has become subordinated to the immediate needs of the market and consumption. It is now a means for fostering *animal laborans*, making employable beings of human beings. According to Hannah Arendt, *animal laborans* signifies humans being reduced to the lowest grade of humanity, concerned just with maintenance of biological life, through the production of goods consumed immediately (Arendt, 1958).<sup>128</sup>

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or organise these options” (Foucault, 1978: 101). This shift means a basic change in the mode through which human beings are made and make themselves subjects.

<sup>127</sup> Dewey, 1993, pp. 49–50.

<sup>128</sup>For how employability has become the keyword for higher education at a global level see:

[https://www.heacademy.ac.uk/system/files/pedagogy\\_for\\_employability\\_update\\_2012.pdf](https://www.heacademy.ac.uk/system/files/pedagogy_for_employability_update_2012.pdf)

<https://www.timeshighereducation.com/features/global-university-employability-ranking-2016>

The alienating effects of neoliberalism are not limited to racialised and colonised people; it dehumanises the white supremacist as well, since its basic principles like that of competition are dehumanising. As Harvey puts it, neoliberalism “has pervasive effects on ways of thought to the point where it has become incorporated into the common sense way many of us interpret, live in, and understand the world”<sup>129</sup>.

Neoliberalism is pushing to the extreme some basic principles of Western modernity and its notion of progress (both in its scientific–technological and moral senses). Although applied in a different context and with different aims, the logic of imposing predetermined formal rules on everyone is the same as Kant proposed, but it is now converted to a managerial rationality. Like the Kantian/cognitivist approach to the world, neoliberalism sees rational choice as a cognitive norm and unquestioned choice of any and all rational beings. In the neoliberal world system, rational choice is reduced to the calculation of the costs and benefits of actions. The principle of transcendental uniformity is at work in neoliberalism, though it is now based on the uniformity of production of commodities rather than formal logic’s a priori principles. Like cognitivism, neoliberalism starts from an abstract and predetermined notion of the individual (a transcendental subject) rather than individuals in their contingent and actual engagements with the world and with others. It emphasises free will and the ability to rationally calculate different options regardless of social circumstances and the diversity of human conditions. Given these principles, all individuals are equally responsible for the outcome of their rational choices regardless of inequalities in all other aspects like class limits, limits imposed on some individuals by power structures, lack of information, poor education, position within social hierarchies, and access to resources. The individuals’ misfortunes or successes are seen as a functions of their own

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[http://eacea.ec.europa.eu/education/eurydice/documents/thematic\\_reports/165EN\\_HI.pdf](http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/165EN_HI.pdf)

<sup>129</sup> Harvey, 2007: 3.

choices not a function of structural social inequalities, while in reality, given the inequalities in opportunities, the ground is prepared for oppressors to win the competition. They have access to the resources necessary for winning such an unequal race, while oppressed groups are deprived of access to resources. All of these are brought under the general heading of rational choice. Rational choice theory is the neoliberal instrumental rationality, despite its claims to objectivity. Its hegemonic position in the social sciences and education clearly shows the hegemony of the neoliberal way of life in contemporary societies and in education.

In retrospect, without reading end products of historical processes in their beginnings we can discern genealogical similarities and contextual dissimilarities between notions of humanity and education as inaugurated by Kant and as they are used presently. Education is now scientific, systematised and unified by a purpose and a conformist idea of human perfection and happiness. The whole machinery of education is driven by economic rational rules like calculability, employability and rational choice. Through the global expansion of neoliberalism, these values have disseminated worldwide. Free market values have become naturalised educational values as the only educational good.

## **A way out of our educational predicament: basic principles**

Making the constitutive role of the colonial past in education clear and problematising its actuality in the present are necessary steps, but not sufficient. We cannot stop at this stage and blame modernity and its major thinkers like Kant for the educational problems of our time and free us from responsibility. This would be a passive or reactive nihilism. In order to make something meaningful of genealogical criticism, we need to take a step further and come up with educational alternatives and a new educational heading. This is to step into an active or positive

nihilism. This approach is enabling and moves beyond slavish repetition of the past or subordination to limits of the present. It sees possibilities embedded in the present and becomes future-oriented. This is, as Nietzsche suggests, to philosophise with a hammer as a tuning fork in his “great declaration of war” against all idols. Genealogical critique is a diagnostic analysis. It needs to be linked with forward-looking solutions, which demand deliberate collective efforts instead of happening by themselves. Briefly, the diagnostic analysis was a first step. It revealed the exclusive, authoritative and non-dialogic character of scientific education and identified it as an impediment to an education proper. It also challenged the dominant narrative of education that covers racist and colonial heritages endemic to scientific education. Taking this diagnostic step, we now need to take a second step and go beyond this negative or deconstructive stage by designing discursive and practical tools through which we can remove impediments in the way of a better educational paradigm. If the diagnostic step was to philosophise with a hammer in order to demonstrate the hollowness of educational myths of neutrality and impartiality, the second step is to philosophise with a tuning fork, to tune education and orchestrate it to a world where a plurality of voices, perspectives and interest are trying to participate in education and making it an education for the common interest of humanity. This is a step through which tools are linked to the problems and problems are solved. As result of these two steps oppressed groups empower themselves, attain a voice of their own and make education a way towards freedom.

The notion of scientific education was an analytic-diagnostic tool. It revealed a structure of Eurocentric domination in education due to persistence of the colonial past coupled with global domination of neoliberalism in the present, as colonial heritages have intersected neoliberal values and underpin the current hegemonic education paradigm. It masks the manipulative violence embedded in neoliberal discourses. To break this educational impasse, we must design new tools and connect them to the problem of scientific education in order to

resolve this problem. We must construct an alternative notion of education that frames an educational mode of resistance and inaugurates a new educational orientation. In the coming sections, I will outline basic principles of education as an art rather than a science.

Basically, the orientation of such an education should be towards “the common” as the space of participation and solidarity rather than transcendental uniformity. François Julien defines the common as “what we are part of or in which we take part, which is shared out and in which we participate”<sup>130</sup>. He distinguishes the common from the universal (formal and a priori imperatives as we saw in Kant) and the uniform (perverted universalism into neoliberal imperative of conformity in production of human capital). This new orientation in education is participatory and thus resists global uniformity staged by neoliberalism and liberates itself from pre-given, abstract and formal Eurocentric imperatives and instead focuses on global solidarity and justice. It challenges the neoliberal competitive mode of subjectivity by appealing to values such as the diversity of human relationships, openness, creativity, participation, peace, love, and divergence. To this end intercultural dialogue is a useful tool. It makes different cultures and divergent knowledge perspectives translatable to each other and can create common spheres of co-orientation and collective action. This is a transformation of basic principles of scientific education from conformity to diversity and challenges the exclusive domination of science in education. Education for the common is an artistic education, since it is a work in progress, with no absolute beginning or end, but always in the middle of inventing and reinventing the human being at individual, collective, local, and global levels. Before furthering the basic shifts of focus I am suggesting, let me say something on the design of the dialogic mode of resistance that I am outlining as a problem-solving tool.

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<sup>130</sup> Julien, 2014:16.

I started this essay by suggesting a method of transfertilising different traditions beyond boundaries of west and east, north and south, not in order to compromise with oppressors, but to truly and on a broad front challenge them and become subversive towards technologies of colonial and neocolonial oppression. We need a polyphonic notion of resistance to overcome centuries of oppression. Generally, who conducts criticism is important, as different bodies are the loci of different histories, experiences and knowledge. This, however, does not mean that ideas are true or untrue by virtue of their origin. Here, I aim to bring together Western and non-Western modes of resistance, resistance from within and from the outside the West, and establish an intersectional mode of resistance in order to prepare the ground for a new kind of resistance beyond the two, one that is dialogic and embraces the best aspects of both. It will be participatory, dialogic, translational, transgressive in nature, and orientated towards the notion of the common. Through such a synthetic notion of resistance we can make scientific education the site of criticism. Western internal struggle can be connected to non-Western struggles and made translatable to each other. We can work with connecting and disconnecting, excluding and including, where we challenge the imperialistic universalism through establishing a translational universalism based on participation and membership in communities of thought and action. This means a critical approach to the self and the other. The others and the self are not insulated from each other, but rather they together establish the ground of the common, which frames an inclusive and participatory notion of universalism. This is, as Julien<sup>131</sup> maintains, a rebellion against the imperial universalism in which the singularity “of the Other of other cultures... is defended”<sup>132</sup>. If Kant brought in the knowing and transcendental subject against limits of an oppressive tradition, the paradigm shift I suggest brings into dialogue a divergent multiplicity of concrete subjects, both in the West and elsewhere

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<sup>131</sup> 2014.

<sup>132</sup> 2014, p. 8.

in the world, subjects constituted by their linguistic, cultural, social, and political contexts. However, they are capable of changing these contexts. In such a rebellion, the individual subjects held their own singular position against the oppressive universalism and the imperialism of culture underpinning it.

In order to make thinkers from the West open, transparent, equal, and responsive interlocutors to non-Western voices, it is necessary to put some basic demands on them. American pragmatism generally and the American educator Dewey specifically, and following him Rorty, have suggested a new Copernican Revolution, where the knowing subject is replaced by the acting subject. It is to put Kant on his feet and reverse the relationships between theory and practice.<sup>133</sup> However, Kant does not easily relax his hold on Western minds. Colin Koopman, for instance, claims that “we need our Kantian inheritance”<sup>134</sup>. Although he adds that “we need it differently than did Kant in his day”<sup>135</sup>, his notions of “we” and “our inheritance” are characteristically Eurocentric and thus limited in scope — they are provincial rather than being universal or common. Koopman<sup>136</sup> and Allen<sup>137</sup> show that a “transformation from within” of Kantian tradition has already been performed by Foucault’s “continuation-through-transformation of Kantian critical thought”<sup>138</sup>. Foucault pseudonymously writes of himself: “If Foucault is perfectly at home in the philosophical tradition, it

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<sup>133</sup> Nietzsche’s attempt to make art a perspective on science, pragmatism’s (Dewey’s) attempts to put the acting subject at centre stage, and Foucault’s attempt to reinterpret Kant’s idea of criticism are all attempts to reverse Kant. However, they have been limited in scope, since they have not taken colonial and racial aspects of Kant into consideration. My suggestion is to stimulate critical dialogues between Western internal critical voices and those of postcolonial, decolonial project and subaltern studies.

<sup>134</sup> Koopman, 2013, p. 16.

<sup>135</sup> Koopman, 2013, p. 16.

<sup>136</sup> Koopman, 2013.

<sup>137</sup> Allen, 2008.

<sup>138</sup> Allen, 2008, p. 44.

is within the *critical* tradition of Kant”<sup>139</sup>. This transformation of Kant from within Western tradition is necessary but not sufficient. It is unable to delink from the colonial past, white supremacy and the imperialism of culture underlying it. The Foucauldian reconceptualisation of the notions of critique and of the transcendental subject has been shown to be useful. This reconceptualisation has not concerned itself with a decolonisation of the Kantian inheritance. In this regard, the concern of the Foucauldian empirical subject is still a Western one and limited in scope. This internal detranscendentalisation must be linked with decolonialisation efforts from outside of the Western tradition.

To take just another example, inspired by Edward Said, Allen<sup>140</sup> challenges critical theory of the Frankfurt School (Kantian in essence) from within to decolonise itself through coming to terms with its notion of progress. Allen questions the modern notion of progress (introduced by Kant and connected to his question of what may I hope?). Underpinning critical theory, this notion of progress was considered “as necessary, inevitable, and unified process”. Allen abandons the notion of progress but reconceptualises it as a notion, which is contingent, disaggregated and postmetaphysical<sup>141</sup>. This is a strategy of reinterpreting modern culture that goes back to Nietzsche and following him to Heidegger. The concern here is to dismantle metaphysics. Starting from such intentions, Heidegger talks of the end of philosophy as the queen of sciences. There are also strategies inspired by Levinas, where the other is recognised and included. These strategies often start from the West as norm and demand to be recognised by the West. They measure the others by the Western yardstick. The leading metaphor is unification of Athens and Jerusalem, an attempt to come to terms with western metaphysical heritage. A transformation from a perspective outside the West is also needed.

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<sup>139</sup> Foucault in Koopman, 2013, p. 13.

<sup>140</sup> Allen, 2016.

<sup>141</sup> Allen, 2016, p. 8–9.

The pragmatist shift from the knowing subject to the acting subject and the shift from necessary notion of progress to a contingent one are necessary, but not sufficient. Actions can be as colonial and racist as theories. The same can be said of the contingent notion of progress. The shift should be much more radical and change racist and colonial preconditions of knowledge and action. Such discussions show, however, that there is an auto-critique occurring in the West. Yet, it is a monologue, a conversation by the West with the West and about the others. Such an approach is itself an exercise in power and silencing the others by speaking for them. The West still places itself in the driving seat of progress. These auto-critical discourses must be investigated sufficiently and made responsive to the call of the oppressed others. The Western subject can certainly, as Allen <sup>142</sup> maintains, create a critical distance to its own constitutive power structures and heritages. The question is whether it is responsive enough to the interests and perspectives outside the West. For instance, Foucault demystified the notion of transcendental subject and replaced it with a contextual and constituted subject. However, these efforts remain attached to the norms, skills and practices valued by the West and are formed in the context of Western imperialism. A dialogic state of mind is needed that brings western auto-critique into dialogue with non-Western struggles against imperialism, racism and neocolonialism, and builds up a community of strugglers. Such a dialogue would transcend the purity of the West and its notions of normality, rationality, autonomy, and identity, as well as the notion of the other and make education intercultural. Emancipation is then “co-authored” in a way that sets free oppressors and oppressed alike. This is a process of universalisation, where education, knowledge, struggles, and freedom become universal through their being adapted by the other and translated into their own contexts. I have termed this process as translational universalisation as opposed to imperial

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<sup>142</sup> Allen, 2008, 2016.

universalism<sup>143</sup>. This notion of the universal is open, a process of perpetually ongoing reciprocal translations, negotiations and re-negotiations instead of being a priori or necessary in virtue of its form or being dogmatic concepts of reason, as in Kant.

The decolonial camp will frame non-Eurocentric or alternative notions of modernity. Enrique Dussel terms this strategy “transmodernity”<sup>144</sup>. My idea of dialogic relationships (negation and affirmation) between the West and its cultural “others” instead of pure negation is based on the impossibility of a decolonial zero point, one unaffected by the burden of European modernity and colonialism. We always start in the middle of ongoing historical events and processes and have to disrupt, reinterpret and reshape them, while we ourselves are part of their flux and reshaped by them. There is no pure or absolute beginning. It can never be created. Revolutions and paradigm shifts appropriate and reinterpret history instead of nullifying it. Nowadays, the globe has become a single arena for knowledge, theories and other commodities; our time is signified by transnational cultural streams. Academe has become part of this marketplace. The majority of decolonial intellectuals are themselves educated and employed by the modern university system. Thus, at stake is self-transformation as part of the change of the world through the transformation of colonial heritage.

From a postcolonial position, Dipesh Chakrabarty<sup>145</sup> suggests provincialising Europe: making the provincial perspective of Europe manifest its universal claims notwithstanding. To provincialise Kant and the Enlightenment is to see them as one alternative among many, and to affirm diversity in ways of life, happiness, rationality, and humanity (in this point Dussel and Chakrabarty are close to each other). Another interesting strategy is to “ab-use” the Enlightenment and affirmatively deconstruct

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<sup>143</sup> Nejadmehr, 2009.

<sup>144</sup> Dussel, 2012.

<sup>145</sup> Chakrabarty, 2000.

or sabotage it as a tool of the colonial masters, as Spivak<sup>146</sup> suggests. This is to encourage the oppressed to use the tools of the masters for their own ends. In my mind, these strategies can be brought together and strengthen each other as critical voices based on experiences of colonised people attempting to release themselves from the hegemony of the West. To challenge the Western imperial notion of universalism is the intersectional point between these strategies. Said<sup>147</sup> sees this “blithe universalism” as the basis for philosophical justification of European imperialism and the link between European culture and European imperialism. According to him the assumption of “the inequality of races” and “the subordination of inferior cultures” are incorporated in this universalism. It thus needs to be renegotiated, reconstructed and reconceptualised. Generally, Said<sup>148</sup> defined Orientalism by illuminating its function as a technology of domination, where through strategies of knowledge/power the other was created in the image of the West. This brings in another line of resistance.

A common insight of these strategies of resistance is their awareness of Europe not being a construction of Europeans alone. Colonialism has worked through force, as well as hegemony and consent. Education, knowledge production and dissemination in a colonial perspective have been powerful means for establishing a hegemonic notion of Europe. An increasing part of the world population is already educated by scientific education. This process works through cultural hegemony, movement of knowledge/power and by consent. Defying the colonial notion of Europe must also be a common endeavour and polyphonic. To emphasise once again, as the voice of Kant is that of provincial Europe, we need to bring in voices from other parts of the world in order to establish a common humanity, a global collective of thought and action. We have a lot to do in relation to the West, as it must get rid of its ignorance of taking itself for

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<sup>146</sup> Spivak, 2012.

<sup>147</sup> Said, 1993, p. 277.

<sup>148</sup> Said, 1979.

the whole humanity. It needs to become provincialised, purged from metaphysical residues, de-colonialised, de-racialised, and detranscendentalised in order to regain its humanity. Other parts of the world need to participate in these processes, empower themselves on an equal basis and on all levels, attain a voice of themselves, and make their stories valid in their own terms. For the periphery to provincialise and decolonise the centre, it has to achieve the strength, courage, skills, and competencies to question it in qualified ways. My main concern is to find points of intersection, where these transformative forces can join, strengthen each other, and overcome the hegemonic West and decolonial education. Such an intersectional approach enables us to take into consideration both colonial differences and internal diversities within each camp. As the notion of Europe has been the starting site and the end result of modern culture, I have things to say about the educational, cultural and political state of affairs in the European Union (EU). However, the limit on space here does not permit such a discussion.

## **Delinking from Kant's Copernican Revolution — a way forward**

In the previous sections, I suggested some basic principles on which we can construct useful tools needed for making changes in the constitutive background of education possible. The distinction between scientific education and science education was an attempt to connect adequate tools to relevant problems and address them at the right level. The problem of scientific education was introduced as an umbrella conception for a cluster of problems, and a multifunctional methodological framework was used to shed light on these problems. We now also need a multifunctional toolkit if we are to remove hindrances in the way of a proper education. In this concluding section, I suggest some basic shifts of focus in how we address educational problems. All

of these are practical steps towards an education that sets us free from limits imposed upon us by racism and colonialism.

To be clear, the notion of education I am suggesting does not abolish the constitutive role of the background altogether; rather it creates a critical distance to it in order to reveal its oppressive concealment. This is to become aware that the invisible background does not exist independently of the foreground. Indeed, it comes into existence and starts to work in and by educational actions at the foreground level. The constitutive role of the background becomes manifest through the constituted foreground, while at the same time they remain different levels of education. It is an immanent critique that makes it clear that education consists of both foreground and background. The relationships between these two interconnected dimensions are signified by unity in tension, where foreground actions manifest the invisible background, the effects of which in many cases go unrecognised. The critical distance to these relationships consists of bringing to awareness the harms of these effects and manifesting them as mechanisms of domination. I am suggesting transforming them into a mechanism of freedom through the shifts in focus.

Before detailing descriptions of these shifts, it is worth mentioning that a basic presumption is that to start from educational actions as the site of freedom rather than formal principles is to bring education closer to art. Although art is not per definition free from racism, colonialism and sexism, it is more apt to steadily keep a critical gaze on the paradoxical relationships between foreground and background, since it is practice-oriented rather than being limited to formal principles. While science tends to become institutionalised, routinised and automatised, art can disrupt these processes through defamiliarising the familiar.

As a first shift, following Foucault, I suggest an alteration from the Kantian notion of criticism to a practical and transgressive

one as a precondition for a shift from uniformity and purity to diversity. As we have seen, the Kantian notion of critique is white, theoretical, scientific, Eurocentric, and concerned with the limits of the male reason. It educates to recognise boundaries and limits as the very transcendental conditions for the possibility of knowledge. This mode of critique is not of much help when it comes to transformation of the basic preconditions of the current paradigm of education, making it intercultural and intersectional, since it safeguards limits, borders and boundaries. It educates within the boundaries of the Western pure reason. We need a practical, multidimensional and multimodal criticism as recognition of the mutually translatable notions of reason. We need to delink from Kant and see him as a provincial thinker informed by experiences of living in colonial Europe.

Foucault has reappropriated the Kantian notion of criticism in a manner that makes it a useful tool for our purpose. Foucault writes: “The point in brief is to transform the critique conducted in the form of necessary limitation into a practical critique that takes the form of a possible transgression”<sup>149</sup>. In his essay “What is Enlightenment?”, which takes its inspiration and title from Kant, Foucault makes it clear that the main concern of such a notion of critique is not the limits of ahistorical formal principles of pure reason, but opening the field of critical thought for plurality of contextual reasons. It is a transformative force aimed at critically responding to one’s own historical situation, as well as critically working on oneself. In an educational context, the focal point is issues such as “what the subject must be, to what condition he is subject, what status he must have, what position he must occupy in reality or in the imaginary, in order to become a legitimate subject of this or that form of knowledge”<sup>150</sup>. It reveals mechanisms that lead to exclusion of the “other” from the “same”. Basically, transgressive critique is exercised along three axes: knowledge (truth), power relations and ethics. More

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<sup>149</sup> Foucault 1984, p. 46.

<sup>150</sup> Foucault, 2003, p. 1.

precisely it is about how the subject is constituted as the subject of its own knowledge (truth), how it is constituted as the subject that exercises power (is subject *of* power) and is submitted to power relations (is subject *to* power), and finally how the subject is constituted as the subject of its own actions. This is to become engaged with a diagnostic of the present and “what today is” in order to investigate the critical capacities of the self for freedom. According to Foucault, transgressive critique is concerned with “the permanent reactivation of an attitude – that is, of a philosophical ethos that could be described as a permanent critique of our historical era”<sup>151</sup>. Such a critical attitude investigates and counteracts forms of rationality underpinning domination, as well as knowledge used as techniques of power. The aim of genealogical critique is not only to identify heritages that are functioning as techniques of domination, but to critically exercise “a historico-practical test of the limits that we may go beyond, and thus as work carried out by ourselves upon ourselves as free beings”<sup>152</sup>.

Generally, criticism from a single perspective can never cover all aspects of oppressions. I argue for a notion of criticism that is polyphonic. Through bringing together multiple perspectives of European self-criticism and non-Western anti-imperialist struggles, such a notion of critique challenges Western cultural hegemony, racial classification of humanity, sexual oppression, capitalist division of labour, colonial differences, and epistemic inequalities. For Foucault, transgressive critique is a multifunctional tool for struggles against forms of domination (ethnic, social and religious), against forms of exploitation (that separate individuals from what they produce), and forms of subjection and submission (that ties the individual to himself and submits him to others). Depending on the context of the struggle one or another form of struggle can become important<sup>153</sup>. Such a notion of critique is then intersectional; it can be used in anti-

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<sup>151</sup> Foucault, 1984, p. 42.

<sup>152</sup> Foucault, 1984, p. 47.

<sup>153</sup> Foucault, 2003, p. 130.

racist and anti-colonial struggles and be conducted from a variety of perspectives. Further, rather than being focused on racial and cultural differences, this critique focuses on colonial, racist, sexist, and capitalist understanding of these differences and counteracts colonial power hierarchies. Recognition of intersectional differences can be used as a means of resistance against domination and oppressive differences in power relations. Such recognition counteracts the colonial homogenisation of world population and minorities.

We need this mode of practical cross-cultural critique to counteract the domination, closeness and totalising tendencies of scientific education, as well as those of neoliberalism. This critique is enabling and leads to redistribution of epistemic authority, power and resources. This notion of critique is also necessary for overcoming the limits of different traditions and cultures;<sup>154</sup> it stimulates dialogues between them and makes them translatable to each other. Transgressive critique is transcultural and creates spaces of common meaning. It recognises differences, while at the same time transgressing boundaries. It puts forward a translational notion of universalism as an alternative to colonial universalism and its oppressive border-crossing. As mentioned earlier, colonial or Kantian universalism postulates a transcendental subject (a white, male and European reason, and a “global subject” who speaks, thinks and acts for humanity and conducts criticism from a Eurocentric perspective). His notion of universality is in other words monophonic and false, since it silences the others in the name of truth. A translational notion of universality is participatory, a never-ending conversation across different cultures, contexts and texts, where different perspectives are in perpetual interchange. It signifies never-ending works in

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<sup>154</sup> As Wittgenstein makes clear, borders are not natural; they are drawn. He asks, “Can you give a boundary?” and answers, “No”, since he believes that “You can *draw*” them (*Philosophical Investigations*; 33). Borders are immanent in discourses and ways of life, rather than being given by nature. This is true of discourses themselves, since “A word has the meaning someone has given to it” (*The Blue and Brown Books*, 28).

progress, instead of being closed and determined once and for all. It brings together critical perspectives of oppressed peoples. It pushes aside the veil of illusion and reveals the narrow-mindedness of Eurocentrism and its true identity as a minority perspective that has imposed itself as the majoritarian perspective.

A second shift of focus concerns one from a cognitivist to an ontological view of education. If the first shift enables human beings to transcend boundaries of oppressive contexts and become engaged with the different other, this shift paves the way for equal participation in cognitive and educational processes. The cognitivist approach occludes and oppresses human participation in cognitive processes (or makes it a privilege of white people) by pretending to be a contemplative and neutral standpoint, where theory goes before action. People should behave in accordance with formal principles instead of recognising the diversity of actions and lifeworlds and their impact on cognition and knowledge. It confines education to acquisition of propositional knowledge as absolutely true. Education for participation, freedom and truth is then marginalised. The epistemological approach transfers a world reduced to propositional knowledge and truth as correspondence between propositions and objects of the world. As a general epistemic framework of scientific education, science is entangled in a subject–object dichotomy and focuses on knowledge through neutral relationships with and detached observation of the world. In reality, taking the detached standpoint of the neutral observer is just an aspiration or an illusion. Knowledge as detached contemplation, independent of modes of human practical involvement in the world, is absolute knowledge and leads to epistemic tyranny and asceticism, since it is enclosed in the mode of the actual rather than being open to potentialities and possibilities endemic to different human situations. To strive for a detached knowledge position is to work for an illusion, as there is no unembodied knowledge. Detached positions are forgotten attached positions; they are attached beyond the knowers’

awareness (this is one sense of ideology). It is to conceal human participation by pretending or believing that they may know themselves as neutral. From a cognitivist point of view, formal principles are the starting point for epistemic and ethical actions. As the theoretical is prior to the empirical, the epistemic subject becomes prior to the acting subject. The formal principles are, however, determined from a Eurocentric perspective and applied in empirical situations by empirical subjects.

Science has colonialised education, while science itself has been colonialised by Eurocentrism as a means of racial classification of humanity and objectifying oppressed bodies as objects of exploitation and scientific studies. These colonialisations have developed in tandem with the expansion of oppressive power of the colonial West and of the epistemic authority of science. Colonial expansion has been an epistemic expansion and colonial violence has been an epistemic violence. They have disqualified and oppressed the diversity of perspectives and homogenised dispersed peoples and perspectives, and brought them all under totalising ideas such as “coloured people” and “blacks”. Science has then been part of the hegemonic power of the West. A gap between the Eurocentric knowledge and lived experiences of the colonialised world has emerged. This disparity is essential and can be overcome through delinking science from the epistemic hegemony of the colonial West. Such a delinking would be a decolonialisation of science and education, a move away from imperial science as a totalising perspective, where knowledge perspectives of marginalised people and those of art are marginalised. The end result of this process will be decolonialisation of knowledge, being and society. The rifts between humanity caused by white Europeans will be healed.

This shift of focus means that our basic experience of the world is primarily through our practical participation in it together with others. Consciousness, detached observation and conceptual ordering are secondary. Instead of cognitive grasping, we practically participate in activities and relate to the world through

our bodies. As Marcuse puts it: “praxis” is our “decisive attitude”<sup>155</sup>. Work and action is the fundamental practical relation between the subject and the world related to the conditions of human survival.

One consequence of this shift of perspective is a reinterpretation of the notion of freedom, the central notion of the Enlightenment. This is a shift from the metaphysical notion of freedom to contextual (immanent) or ontological freedom. The Kantian and neoliberal or metaphysical notion of freedom is confined to rational choice, where the subject, as an act of free will, admits or rejects alternatives (existing principles), which are there at a distance (the acting subject is detached from its own actions). The task is to establish a rational relation to them and find ways of appropriating or rejecting them. This choice occurs in accordance with uniform or universal principles. The manifold nature of human situations is ignored. To achieve this, Kant established principles to be communicated by virtue of their unified, pure form or identity. Consequently, the universal, the pure and the uniform are identical and related to the self, while the other are dehumanised as impure, heterogeneous and embodied.

Contrary to this, the ontological notion of freedom is contextual and sensitive to the diversity of human relations to the world. It is not a characteristic to be attached or detached from the subject, but rather a way of being in the world endemic to the subject. This notion of freedom not only recognises freedom of the others — the otherness of the others — by recognising them and letting them be the beings they are in their own terms, but also invites them to common action aimed at common interests. Neoliberalism has destroyed the oppositional subject by objectifying human beings as competitors in accordance with a single global form, that of *homo economicus*. Consequently, human beings are made alien from themselves, their world and each other.

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<sup>155</sup> Marcuse, 1987, p. 33.

As a style of being in the world, ontological freedom can be conceived in opposition to alienation. It is based on ontological and epistemological indeterminacy as opposed to dogmatism. Based on the mode of potentiality immanent in each moment and each individual, it is a basis for becoming, change and transformation. Neither the world nor knowledge of it is fixed; they always can be otherwise. Kant connected education with moral freedom. The Kantian freedom is, however, just an assumption, a teleological and metaphysical freedom related to a predetermined purpose of nature. Human beings are actual beings and practically engaged in the field of their daily life. The process of historical changes occurs, contrary to Kant, through practical engagement of human beings in concrete historical conditions. The acting and knowing subjects are constituted subjects rather than transcendental. They change societies while at the same time producing and reproducing themselves. It is through processes of subjectification that educational and other social institutions are reproduced in the individuals. Through these ongoing processes subjects act upon themselves, others and their social environment. This is a process of construction, reconstruction, adoption, and transformation in order to highlight the temporal horizon of knowledge and historical ontology of the self, as well as the temporality of cultivation and knowledge acquisition. Contrary to Kant, such approaches have diversity of action and praxis as their starting point rather than abstract ideas and principle.

In light of ontological shift, we can reinterpret the notion of the universal. This transformation moves from imperial universalism to the participatory. It grows out of free and common action of the selves and the others. Whereas the Kantian universality works through imposition of uniform imperatives, ontological universalism works through participation in the shared world of collective actions. Unlike logical prescriptions, participation is based on decisions: one decides to encounter the other in a dialogical relationship. To engage in a dialogic encounter with the others and be receptive to it brings in several possibilities for

the self and the other. It offers possibilities of participating or not, or of withdrawing from participations already established. It is thus contingent and entangled with specific strategies of power. It is not imposed on the individual from outside and by formal principles, but rather it is a matter of exercising power relations within specific communities. The notion of the universal suggested here is based on practical memberships in the common that can go beyond boundaries of cultures, gender, race, and geography.

As more and more people decide to become members of a community, participate in it and share perspective and practice with other members, the boundaries of the common extend. People also decide to share points of view beyond familiar contexts of their lifeworld, and these points of view become common or universal since many people share them. This universalism emerges by virtue of contingent necessities like coexistence of cultures and countries in a global world and migration and movement across borders, rather than formal logical principles. Global communities like those of the UN and PEN International are good examples.<sup>156</sup> These communities are the basis of universal human rights in virtue of membership of states and writers, respectively, rather than being transcendental-logical. The same can be said of organisations related to women's, workers' and children's rights.

A reference to Aristotle sheds light on this rather ambiguous point. He begins his *Politics* with a discussion on the notion of community. For him, family and tribe cannot be the loci of the universal but the city can, since the city is a community. He related the notion the city-state to notions of the “good life”, “faculty of speech in man” and human natural tendency “toward political association”<sup>157</sup>. Briefly stated, these notions can be understood as a result of contingent human decisions and daily

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<sup>156</sup> Julien, 2014.

<sup>157</sup> Aristotle, 2001.

necessities to come together in communities rather than being logically concluded. I bring together notions of the human being as a political being capable of speech and desirous of a good life to underpin the claim that the universal is a matter of politics and desire, conditioned by language, history and memberships in communities. It is negotiable and subject to dialogue within cultures and across them. Thus, we need a dialogic notion of education to foster dialogic states of mind, solidarity and togetherness in thinking, talking and acting. The notion of dialogue is not limited to school situations but is a renegotiation of basic principles of education. These cannot be achieved through implementing prescriptive principles of pure reason, but by collective efforts to remake the constitutive background of education in a way that more and more people endorse and share its basic rules. The possibilities to make the constitutive background of education universal are immanent in the very context of life and education in our global age. As a first step, we need a counter-education that resists and subverts neoliberal domination in education, since it is the main impediment to an inclusive universal education.

As result of taking part in these processes, the oppressed become political agents of transformation and redistribution of power and authority. The local and the global become aspects of the same process of becoming, where people open themselves to be changed and change. The transgressive notion of critique, the practical approach to education and the translative/dialogic universalism suggested here facilitate such a participatory state of mind. They are based on multiplicity of reason and logic, and open up venues for dialogue and interaction. They transgress through universalising and universalise through transgression, thereby dismantling the logic of colonial universality. For instance, through practical and ontological criticism we can question Orientalism and Occidentalism and established cognitive hierarchies between the West and the East as geocultural structures of superiority and subordination, and focus on the common and radical actions against racist,

neocolonial and neoliberal power structures. This approach creates intersectional alliances beyond traditional divides, since it is about liberation of both the oppressed and oppressors. In order to accomplish this task, we need an education that empowers people with no voice or who are struggling to make their voice valid in the current educational discourse. This is necessary in order to create qualified knowledge perspectives and educational alternatives, qualified external critics to the West, informed interlocutors and adversaries who challenge the Western hegemonic perspective, and thereby establish an intercultural participatory togetherness in the world.

Ontological/practical approaches can be used as tools to rearrange power relations for the benefit of the oppressed. Power relations are to be distinguished from domination. Whereas power relations are transversal, fluid, changeable, open, and allow for social mobility, domination refers to power relations being locked by an individual or groups of individuals. Domination blocks social mobility (Foucault, 1984). To my mind, scientific education stands for educational domination, as it has gained global validity through oppressing local singularities. It has locked educational power relations for the benefit of a Eurocentric frame of mind and an imperial notion of the universal. Thus, it blocks epistemic, social and cultural mobility at a global scale. Further, it is oriented towards theoretical knowledge about racialised and colonised others, rather than towards a dialogic knowledge paradigm shared by them. It is not an accident that Brexit, Donald Trump and far-right tendencies in Europe use such an objectifying view with regard to regulation of education, media, labour market, and public spheres in order to conceptually and physically exclude migrants. We need then an education that enables the individuals to collectively surpass mechanisms of domination and inequality and constitute a global educational common of equals, and to collectively exercise a transgressive genealogical critique and reach beyond neoliberal, neocolonial and racist compliance with market rationalism. Such individuals act in concert with public-

political settings and conduct dialogue across cultural boundaries (intercultural dialogue). They not only attain a voice and make valid their own narratives, but also do it in dialogue with the others. This will prepare the ground for a notion of universality based on participation, political decisions and shared experiences within communities of thought and action. Centuries of slavery, colonialism, Eurocentrism, sexism and capitalism have blocked linguistic and cognitive development of enslaved, colonised and exploited people. Non-Western ways of life have been discredited by colonial discourses and practices. These discrepancies in power relations place the colonial way of life, colonial languages and knowledge perspective above diversity of human conditions. Oppressors are not going to accept voluntarily a counter-education that will end their domination. It should be the outcome of educational struggles on a broad front. This process is a move away from current white and colonial ignorance to education as *paideia* as a tool to overcome racism and neocolonialism. Education becomes then truly enlightening, a means for the oppressed to emerge from their position as oppressed and regain the self-confidence to stand up for themselves, inscribe themselves in history in their own terms, and challenge colonial differences by delinking from the logic of colonialism. This is a way to overcome residues of colonialism by critically and creatively examining and re-examining established views of humanity and education.

The shifts in the frame of mind discussed above bring us to a third shift, related to the relationships between art and science and the notion of truth underpinned by each. This is needed in order to establish an adequate notion of the truth that corresponds to the transgressive notion of critique, experience-based notion of the universal, and practical approach to the world. If the Kantian educational paradigm was a shift from the art of education to the science of education, in order to move away from the concrete reality of the sensible world and subordinate it to the abstract principles of reason, this shift will make education artistic and bring it closer to the practical way people are engaged in their

everyday world. It considers art as a perspective on the world rather than a profession. It is a style of doing things closer to the practical way we connect to the world. Colonial conquerors oppressed colonised parts of the world in the name of knowledge, truth and faith. They totalised the world population under the Western maxims as the epitome of truth. The shift at stake here is a move away from this imposed uniformity by propositional notion of truth towards recognition of the equal value of different forms of life and practical notions of truth as a way of being in the world. It is also “provincialising Europe”, since imperial universal maxims are the provincial interests of white Europe. This is also a shift from science as detached observation of the world to art as diversity of action and the joy of creativity. Art becomes a perspective on science and brings into it a participatory style of creating, thinking and acting. Science can then become detached from the colonial notion of reason and imperative conformity. It also becomes de-territorialised since the West is no longer the exclusive territory of truth. Such a notion of truth is artful and nomadic, related to human creation in concrete contexts. Seeing life as a work of art, Foucault asks, “Why should the lamp or house be an art object but not our life?”<sup>158</sup> As one’s life is one’s own work, the self is not alienated from its life. While science is seen from the perspective of art, art in turn is seen from the perspective of life, as Nietzsche has taught us. This is a move away from anthropocentrism and humanism towards seeing life as the ultimate perspective on our knowledge, deeds and discourses. Nature is not conceived as something that should be dominated or tamed by culture, and the traditional dichotomies of the object and the subject, the sensible and the intelligible, nature and reason become obsolete. The same can be said of the relationships between the imperial West and the rest of the world.

Our perspectives and descriptions are always partial and can never cover all aspects of objects and phenomena of the world.

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<sup>158</sup> Foucault, 1997, p. 261.

To be objective is to see things from as many perspectives as possible, instead of from a single dominant perspective, be it that of science, philosophy, art, the West or the East. Against this background, it is liberating to equate truth with freedom and see freedom ontologically, as Foucault, following Heidegger, does, as a mode of participating in the world and a philosophical ethos. It is the freedom to take part in the common and share perceptives and practices with the others. It is the mode of possibility, meaning knowledge of the world is contextual and can always be otherwise. Truth is to reveal potentialities as the very basis for knowledge. Freedom in turn becomes a manner of living that lets potentiality come forward through possibilities embedded in one's participation in worldly activities, together with the others. Truth and freedom are to demonstrate how possibilities of being different exist within everyday participation in and questioning of the world, a world of possibilities that is impeded by racial and colonial domination. To live in truth and freedom is a mode of being open to diversity. It is a transformative force when it comes to scientific education. The focal point is the specific educational conditions of today as a common concern, rather than abstract views of human perfection. In other words, an education inspired by the arts is an attempt to grasp material conditions of doing things in neoliberal environments and an attempt to counteract the neoliberal set of values such as competition and entrepreneurship. As a result, human beings become one with their "species being" and express themselves through their action and speech. It is an education away from the colonial mode of being, an education from within as well as from the outside of the specific condition of neoliberalism aimed at freedom from its oppressive constraints.

Given the above-mentioned shifts of focus, we need to question the relationships between philosophy, education and science as hegemonic forms of knowledge. Kant's Copernican Revolution has extensively impacted the relationship between science and philosophy for the worse, as the Kantian turn made philosophy

scientific.<sup>159</sup> According to Habermas, “Since Kant, science has no longer been seriously comprehended by philosophy”<sup>160</sup>. Yet, due to Kant’s influence, acquisition of scientific knowledge and its method of inquiry have been the main function of scientific education. At the same time, as Nietzsche observed, philosophy became a profession (professorship), limited to academe and resigned its critical position, while science developed an excessive faith in its truth as the exclusive way of knowledge of the world. Echoing Nietzsche, Dewey points to a fundamental trait of modern epistemology: it is becoming its own judge in the hands of 18<sup>th</sup>-century Enlightenment intellectuals. He writes, “When I say that the only way out is to place the whole modern industry of epistemology in relation to the conditions which gave it birth and the function it has to fulfil, I mean that the unsatisfactory character of the entire Neo-Kantian movement is in its assumption that knowledge gives birth to itself and is capable of affording its own justification”<sup>161</sup>. While, due to Kant’s influence, philosophy has become a scientific discipline, it has had no or a very weak critical impact on science and scientists. Science has not only become its own judge but also the underlying ground and judge of education. This is a pernicious and closed system of domination, its claims to objectivity notwithstanding, since education, as Kant maintains, is the way to humanity.

As mentioned, the Enlightenment made a universal notion of progress valid based on an epistemological and a moral–political aspect. Reinhart Kosseleck highlights these two aspects of the modern or Kantian notion of progress: “Progress (der Fortschritt), a term first put by Kant, was now a word that neatly and deftly brought the manifold of scientific, technological, and industrial meaning of progress, and finally also those meanings involving morality and even totality of history under a common

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<sup>159</sup> Richard Rorty (2009: 132) sees Kant’s influence as deleterious to philosophy. According to him, in Kant’s hands philosophy became a scientific discipline, though “the most basic discipline”.

<sup>160</sup> Habermas, 1972, p. 4.

<sup>161</sup> Dewey 1963, pp. 19–20.

concept”<sup>162</sup>. In its epistemological sense, progress was considered as epistemic superiority in later generations of the white West, since progress was assumed to lead to accumulation of knowledge for the benefit of these generations. Besides, education also brings these generations closer to perfection. Kuhn<sup>163</sup> demonstrated, however, that a cumulative notion of knowledge was wrong. Science’s development was rather characterised by disruptive paradigm shifts. Yet, the colonial aspect of epistemic superiority of the West did not concern him. Another assumption of the progressivist sense of cognition is its being independent of the cultural and linguistic context. Bringing together science and technology studies and postcolonial studies, Sandra Harding<sup>164</sup> reveals that this is also wrong. She shows that that knowledge is inevitably historically and culturally situated, and that there are different scientific traditions in Europe and other places in the world. Ludwik Fleck<sup>165</sup> is also a pioneer in arguing for the diversity of scientific traditions in European culture. Helen Longino<sup>166</sup> has argued for a science that is less androcentric and Eurocentric. To make science responsive to feminist, postcolonial and decolonial calls, we need to bring in critical perspectives of art and philosophy and cognitive resources that the knowledge perspectives of oppressed people offer. This is in order to delink sciences from colonialism as a scientific–technological project and link it to visions of epistemic equality that are so widely voiced in the contemporary world. This will be a new orientation in scientific thinking in tune with the educational demands of today.

The colonial view of science and its continuation in neoliberal circumstances has not only been alien to colonised people, it has also alienated science from the knower in the West. The rift between knowledge and knower is becoming deeper and deeper

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<sup>162</sup> Koselleck, in Allen, 2016, p. 8.

<sup>163</sup> Kuhn, 1970.

<sup>164</sup> Harding, 1998.

<sup>165</sup> Fleck, 1979.

<sup>166</sup> Longino, 1998.

as science is defined in terms of capital. The new orientation in science puts it in relation to the notion of the universal, truth, objectivity, and critique, as they were discussed above. As such this new orientation is dealienating and decolonialising since it stimulates science and scientists to bring to consciousness what they are thinking. It paves the way for their thinking that is in tune with the demands of our time.

The transgressive notion of critique, the practical mode of being in the world, translative universalism, and education based on art are interconnected elements of a shift of focus away from an educational heritage based on abstract and imperial principles of rationality towards an education in tune with the practical mode of the human being in the world. Consistent with these notions, a last shift of focus is needed. This shift deals with human types. Education is about the type of human beings that each epoch will foster, their main characteristics, and style of being and behaving. The Kantian educational paradigm aims at moral perfection in accordance with authoritarian universal rational principles. Kant stood at the very beginning of modernity and established a notion of humanity as rational being. The historical outcome of such an idea is *homo economicus* (a competing being), organising its life according to rational calculation and choices. It is an abstraction and reification of humanity. As a non-alienated notion of humanity, *homo faber* (a creating animal) can replace the notion of *homo economicus*. Or more comprehensively, we can see humanity as different potentialities: *homo sapiens*, *homo politicus*, *homo laborans*, *homo faber*, and so on (a *polytropos* being), since humanity is a potentiality rather than being an actuality determined, herein the importance of education. Contrary to the *homo economicus*, the *homo polytropos*' way of being in the world is aesthetic or artistic. Consequently, it is not limited to a single image of humanity but is based on manifold ways of being and acting. Art is here conceived of not as a profession but as a perspective. Further, *homo faber* or better, *homo polytropos*, can be conceived as an acting and participating being, rather than an ascetic being or a neutral observer of the

world. Such a view of humanity is enabling and moves away from alienation of human beings from their work, action and themselves. An education inspired by this understanding of the human being lets the innermost talents of humanity thrive instead of imposing abstract principles of economics on it. Creativity is here considered in the broad sense of creating oneself, one's world, one's work, and being at one with them, ultimately to meaningfully contribute to the common world one dwells in. Such a view of humanity can function as the basis for a new, dialogic and inclusive educational paradigm, where reflection (critique), creativity and systematicity interact with each other. Not being alienated from oneself, one's creativity, one's world, and the other, such a creature is eligible to promise, as Nietzsche<sup>167</sup> would say. Contrary to the distorted picture of detached observational status, it is signified by practical participation in the world. Education for truth is thus education for freedom, as the essence of both is coextensive with a way of being in the world and with the other in which we care about the world and the other. This way of being in the world is free and delinked from colonial and racial violence. Educated in such a mode of education, we stand in a free relation to ourselves, the others and our world. This notion of freedom is concrete, freedom of particular human beings in their particular worlds related to art-science and to the field of practical involvement. It is practical and a latent potentiality within worldly activities. We are free if we belong and are open to a world that offers a range of accessible possibilities. We then have to give up total control of the world and the other and become open to the diversity of world. Our openness is then a condition of the world's openness to us.

Correspondingly, to the poly-dimensional mode of being in the world, I suggest that the mode of struggle is intersectional, inclusive and active rather than being reactive and exclusionist. The oppressed overcome their position of powerlessness and

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<sup>167</sup> Nietzsche, 1992, II §1–7.

empower themselves through combats on different fronts (class, sex, race, etc.). They refuse to be oppressed or to be inferior in any sense. In such a mode of struggle the oppressed affirm their own inclusive way of being in the world instead of just negating oppressors. Rather than being motivated by revenge or react to what oppressors do, they distance themselves from oppression by refusing to be oppressed. They distance themselves from oppression instead of aspiring to take over the position of oppressors. Such a struggle also liberates oppressors, as the aim is a human type beyond the divides of oppressed and oppressor. What is negated is oppression. This style of action is free from vengeance and from what Nietzsche calls *resentiment*. In such a state of mind the constitutive background and the constituted foreground of education converge towards truth, justice and freedom and let the uniqueness of any human being become manifest in her/his action and speech.

## **Kant abbreviations**

Anthropology from a Pragmatic Point of View

APV

Critique of Pure Reason

CPR

Critique of Practical Reason

CpPR

Critique of Judgment

CJ

Lectures on Logic

LL

Lectures on Pedagogy

LP

On Physical Geography

PG

What is Orientate Oneself in Thinking?

WOT

Observations on the Feeling of the Beautiful and Sublime

OFBS

Essay Regarding the Philanthropinum

ERP

Idea for a Universal History

IUH

An Answer to the Question of What is Enlightenment?

WE

Of the Different Races of Human Beings

DRHB

Prolegomena to Any Future Metaphysics

PFM

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