Education and intelligence: Reconstructing John Dewey's theory of intelligence from an educational perspective.

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EDUCATION AND INTELLIGENCE

RECONSTRUCTING JOHN DEWEY'S THEORY OF INTELLIGENCE FROM AN EDUCATIONAL PERSPECTIVE

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EDUCATION AND INTELLIGENCE
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Abstract

This dissertation presents a philosophical inquiry into the concept of intelligence by reconstructing John Dewey's theory of intelligence and investigating its educational implications. It presents three critiques of educational practices and theories that, from a Deweyan point of view, are built on misconceptions or oversimplifications of intelligence. While his theory of intelligence is primarily expressed in implicit terms, it offers a nuanced analysis of the sociality and contextuality of intelligence, questioning some of its traditional or mainstream conceptions. The reconstructed theory presented in this dissertation implies that rather than holding onto the idea of individual intelligence, education (and those who are being educated) might benefit from focusing on the social practices and contexts that enable intelligence. The contextuality of intelligence suggests that conceiving intelligence as something that can be universalized, abstracted, and then redistributed is problematic. Dewey's theory also suggests that people are rich with experience-based contextualized intelligence. To make the most of this, education needs to provide people with a robust theory of knowledge and an aspiration to be informed about the world in multiple and diverse ways. Learning the habit and processes of different kinds of inquiries could benefit societies by contributing to creative and intelligent democratic problem-solving in the inevitably unknown contexts of the future.

Keywords: democracy, education, intelligence, John Dewey, philosophy of education

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Tiivistelmä

Tämä väitöskirja on filosofinen tutkimus älyn käsitteestä: se esittää rekonstruktion John Deweyn älyn teoriasta ja tarkastelee, mitä siitä voidaan johtaa kasvatuksen näkökulmasta. Se tarjoaa kolme kritiikkiä kasvatuksen käytännöistä ja teorioista, jotka Deweyn älyn teorian näkökulmasta rakentuvat väärinkäsityksille tai liialliselle yksinkertaistamiselle. Deweyn tuotannossa läsnä oleva älyn teoria näyttäytyy ensisijaisesti epäsuorasti hänen käsitellessään muita aiheita. Siitä huolimatta hänen teoriansa analysoi vivahteikkaasti älyn sosiaalisuutta ja kontekstuaalisuutta, samalla kyseenalaistaen joitakin siihen perinteisesti liitettyjä tai yleisesti hyväksyttyjä mielikuvia. Tässä väitöskirjassa esitetty älyn teorian rekonstruktio esittää, että kasvatus (ja kasvatettavat) saattaisivat hyötyä siitä, että huomioimme yksilöllisen älykkyyden sijaan paremmin ne sosiaaliset käytännöt, jotka mahdollistavat älykkään toiminnan. Älyn kontekstuaalisuus puolestaan muistuttaa, että sen käsittäminen jonain, minkä voi yleistää, abstrahoida ja tarjoilla eteenpäin, on ongelmallista. Deweyn teoria esittää myös, että ihmisillä on huomattava määrä kokemukseen pohjaavaa kontekstuaalista älykkyyttä. Jotta tämä äly saadaan hyödynnettyä, tulee kasvatuksen tarjota kasvatettaville vankka ymmärrys siitä, mitä tieto on sekä halu olla perillä maailmasta erilaisin ja monimuotoisin tavoin. Yhteiskunnille on hyödyllistä, jos kasvatettavat tottuvat erilaisiin maailman tutkimisen tapoihin ja prosesseihin, sillä nämä edesauttavat luovaa, älykästä ja demokraattista ongelmanratkaisua tulevaisuuden konteksteissa, jotka ovat vääjäämättömän tuntemattomia.

Asiasanat: demokratia, John Dewey, kasvatus, kasvatusfilosofia, äly, älykkyys

Ainolle, Anjalle ja Elmalle.
Ja Pimmille.

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List of original publications

This thesis is based on the following publications, which are referred to throughout the text by their Roman numerals:

I   Kauppi, V.-M., Holma, K., & Kontinen, T. (2020). John Dewey's notion of social intelligence. In K. Holma & T. Kontinen (Eds.), *Practices of citizenship in East Africa: Perspectives from philosophical pragmatism* (pp. 44–54). London, United Kingdom: Routledge. https://doi.org/10.4324/9780429279171-4

II Kauppi, V.-M. (2021). Älykkään toiminnan kontekstit: Deweyläinen näkökulma kasvatuksen dekontekstualisaatioon [The contexts of intelligent action: A Deweyan approach to decontextualization in education]. *Kasvatus, 52*(4), 388–400.

III Kauppi, V.-M., & Drerup, J. (2021). Discussion and inquiry: A Deweyan perspective on teaching controversial issues. *Theory and Research in Education, 19*(3), 213–234. https://doi.org/10.1177/14778785211052199

An English translation of the Original publication II is provided in the Appendix of this dissertation.

Contents

1   Introduction: Reconstructing John Dewey's theory of intelligence from an educational perspective

This dissertation presents a philosophical inquiry into the concept of intelligence by reconstructing John Dewey's theory of intelligence and investigating its educational implications. It presents three critiques of educational practices and theories that, from a Deweyan point of view, are built on misconceptions or oversimplifications of intelligence. Intelligence is a commonly used concept in everyday parlance: It is associated with rationality, reasoning, understanding, inventiveness, cleverness, braininess, wits, handiness, general cognitive capacity, and so forth, depending on the context. How we conceive such a concept has fundamental effects on our educational theories and, consequently, our educational actions. A philosophical analysis of intelligence is crucial to making well-founded resolutions that foster intelligence in education as well as to making education itself more intelligent. However, as John White (2002, p. 78) points out, "In philosophical works we can find discussions of consciousness, perception and sensation, thought, action, memory, emotion, and imagination, but rarely anything on intelligence."[1]

In most cases, academic research and conceptual work on intelligence are conducted within psychology and the distantly related field of artificial intelligence research. There has been some ambiguity regarding the concept, or as Sternberg (1998, p. 376) puts it, "Viewed narrowly, there seem to be almost as many definitions of intelligence as there were experts asked to define it." Approaches such as Gottfredson's (1997) *Mainstream Science on Intelligence*, a statement signed by 52 researchers, regard intelligence mostly as something individual, measurable and quantifiable, and genetic and hereditary.[2] For a comprehensive account of expert conceptualizations of intelligence, Legg and Hutter (2007) surveyed more than 70 definitions from within the research fields of psychology and artificial intelligence as well as definitions of intelligence in encyclopedias and dictionaries. They claimed that despite seeming differences, these definitions could be merged into a comprehensive account as follows:

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[1] There are, of course, exceptions (see, e.g., Ryle, 1949).

[2] Even if intelligence were 99% genetic (which it obviously is not), as educators, we should focus mostly on that 1% that is not. The reason is that unless we go for the genetic engineering of humans (which we hopefully will not), that 1% is the part that we can actually do something about. Education is the obvious way to do it.

> Intelligence measures an agent's ability to achieve goals in a wide range of environments … Features such as the ability to learn and adapt, or to understand, are implicit in the above definition as these capacities enable an agent to succeed in a wide range of environments. (Legg & Hutter, 2007, p. 9)[3]

Subscribing to a Deweyan perspective, I find delight in the manner in which the contextuality of intelligence and the importance of learning are highlighted in Legg and Hutter's definition. However, this dissertation was initially motivated by a feeling that conceptualizations of intelligence, such as those presented above, miss something essential. I was compelled to ask the following questions: How meaningfully and reliably can we define universal markers of intelligence? Could there be implicit biases in our conceptions of intelligence that explain why the role of environmental and contextual factors appears to be so paltry in many approaches to intelligence—and is this not educationally a rather important thing?[4] More importantly, *if* intelligence measures an agent's ability to achieve goals, what are the goals to be achieved? Is the attainment of any given goal to be regarded as intelligent? Who sets the goals and how? Is it not the case that the ability to set goals and the willingness and ability to weigh and deliberate different goals, and possibly change the goals when needed, are indeed apparent and indispensable components of intelligence? The aim of this dissertation is to broaden our understanding of intelligence by discussing themes related to such questions and implementing a philosophical inquiry into the concept.

As Sternberg (2000, p. 12) notes, "Implicit theories of intelligence and of the relationship of intelligence to society perhaps need to be considered more carefully than they have been." In this dissertation, this is done by reconstructing Dewey's theory of intelligence, which, for the most part, is expressed in his various works as he discusses other issues. Therefore, it has not been possible to simply refer to Dewey's theory of intelligence; rather, it has had to be reconstructed from texts in which it is implied. Excavating this theory with an educational focus formed the main research question of the study: *How can John Dewey's philosophy contribute*

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[3] Sternberg (2000, p. 8) is more careful in his generalization: "To the extent that there are common themes in these definitions, they would appear to be with respect to the ability to adapt to the environment and the ability to learn."

[4] Classical modern conceptions of intelligence were contested already in 1923 by E. G. Boring (1923, p. 35): "intelligence as a measurable capacity must at the start be defined as the capacity to do well in an intelligence test," pointing to the premises of a test producing its results. For other related debates, such as on the role of cultural differences in defining intelligence, see, e.g., Sternberg and Grigorenko (2004).

to our conceptions of intelligence in education? The theory presented in this dissertation is partly contradictory vis-à-vis some of the mainstream views of intelligence as it questions some of their core premises rooted in Western philosophical traditions: It provides a critical and complementary approach to questions of education and intelligence.

In what follows, I present an analysis of the sociality and contextuality[5] of intelligence, as elaborated in Dewey's theory. He claims that intelligence is commonly misunderstood as a feature of an isolated individual, a static capacity, or as an elite possession. Without denying the possibility of individual differences in intelligence, Dewey portrays intelligence as a fundamentally social process (Original publication I, pp. 45–48). This implies that, rather than holding onto an idea of individual intelligence, education (and those who are being educated) might benefit from focusing on the social practices that produce intelligence. The contextuality of intelligence suggests that conceiving it as something that can be universalized and abstracted is rather problematic; it also liquidates the possibility of wholesale solutions in education for intelligent action (Original publication I, pp. 48–49). Educational solutions that work well in one context might not work in others; they might even produce completely opposite outcomes. The essential thing is not the solution as such; rather, it is how and why it works in interaction with its contexts. A better understanding of these interactions is the key to interpreting an intelligent solution from one context to another.

It is, however, rather inevitable that, in general, our practices are somewhat decontextualized—that is, they downplay some features regarding their contexts. If we wish to operate in changing environments and varying situations, we must make assumptions and generalizations based on our contextual experiences, which then also enable action in other contexts. However, there is always a risk of our assumptions and generalizations not fully meeting the new conditions. In the Original publication II of this dissertation, I distinguish three harmful spheres of decontextualization in education[6] (for more detail, see Original publication II): decontextualizing individuals from their social contexts and interdependences

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[5] Dewey uses the word *context* often interchangeably with (or in relation to) such concepts as *environment* and especially *situation* (see, e.g., Dewey, 1938, p. 72). Therefore, the analyses of contextuality in Dewey's work are also discussed under other concepts (see, e.g., Hildebrand, 2018b, *Experience is Not the Whole Story: The Integral Role of the Situation in Dewey's Democracy and Education*).

[6] As Säljö (2001, p. 39) writes, based on Dewey, decontextualizing learning, which leads to what we call school and education, is both the prerequisite for learning in a complicated society and the change that creates many of the problems of learning that we may nowadays observe in school.

inhibits intelligent social action; decontextualizing intelligence as an outcome of absolute knowledge neglects the intelligence of some, hampers the actualization of a large intelligent potential, and blankets harmful societal power relations; and decontextualizing education from other areas of society brings external goals to education (e.g., industrial and economic), hides some essential interests behind these goals, and prevents the intelligent development of societies, which is made possible by a critical scrutiny of means and ends in sufficiently autonomous education.

The Original publication III of this dissertation, written in collaboration with Professor Johannes Drerup, suggests that although members of societies are equipped with highly contextualized everyday intelligence, this intelligence cannot be extensively made use of as such, but methods for making the most of it can be learned collectively and gradually. We argue that learning the habit and processes of inquiry and taking the broadly understood methods of science into everyday use through education could benefit societies by contributing to intelligent democratic problem-solving more so than contemporary discursive or deliberative approaches. In order to create societies that make better decisions concerning our shared goals, we need to broaden our horizons from democratic discussion to a shared inquiry of the world, of our problems, and of our possible actions (see Original publication III).

This dissertation is part of a larger renascent interest in John Dewey's thinking and pragmatism, which emerged at the turn of the millennium.[7] Although there are few themes that Dewey did not engage in in his philosophy, he is best known for his writings on education, especially the importance of theory and practice reciprocally informing one another—a red thread that runs through his work and was expressed in very concrete terms already in his popular early works *My Pedagogic Creed* (1897) and *The School and Society* (1899). However, educational research on Dewey also has a sad history of misconceptions (see Godfrey-Smith,

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[7] In her book *Elusive Science*, Ellen Condliffe Lagemann (2000, p. xi) made a lamenting statement that Dewey "lost," that E. L. Thorndike "won," and that in Dewey's homeland, this turned educational study individualistic, behaviourally oriented, professionalized, narrow, and technocratic. However, according to Lagemann (p. xi), the victory was not a complete triumph. One could even argue that it is not a game of win or lose. Starting at the end of the millennium, with such notable figures as Jürgen Habermas and John Rawls, pragmatist philosophy has regained attention, especially among scholars of democratic theory, social and political philosophy, and communication (Anderson, 2006; Misak, 2000; Talisse, 2010). It is also noteworthy that the renascent interest in pragmatism is far less American than the original school was, or as Festl (2021b, p. 3) points out, "Pragmatism is up and running in European discussions of social philosophy."

2002, p. 25; Scheffler, 1973, p. 190). Simplified interpretations have led to such platitudes and slogans as "learning by doing," which may be interpreted in unlimited ways. Although a Deweyan conception of the public's potential in democratic decision-making may currently be of central interest to some (Ridley, 2020; Rydenfelt, 2020a, 2020b, 2021) and gaining increasing attention, there is no oversupply of academic research on Dewey's theory of intelligence and its educational implications. I believe that this dissertation is the first to examine them in such detail.[8] This is intriguing, considering Dewey's status as an undeniable classic in the philosophy of education and acknowledging that intelligence appears to be one of his favorite words (Biesta & Burbules, 2003, p. 114). It is even more intriguing if we consider Scheffler's (1974) claim below:

> Dewey elaborates a theory of *intelligence* in offering a unified conception of thinking as an active interchange between organism and environment—an interchange which reveals the continuity between the humblest bit of learning by a child exploring its room and the most refined piece of theorizing by an experimental scientist investigating the natural world. (p. 2, emphasis in original)

In what follows, I first introduce the research questions and the course of this inquiry, explicating my choice of research questions in Chapter 2. This is followed by a presentation of the materials and methods of the research in Chapter 3. Chapter 4 presents the theoretical background of the research, contextualizing Dewey both historically and philosophically and discussing some of his central concepts and themes regarding this dissertation. The scope is then narrowed by taking the analysis further to the contexts of particular discussions in Chapter 5 as I present the main arguments and analysis of each of the original publications included in this research (see Sub-chapters 5.1, 5.2, and 5.3). In Chapter 6, I present a summary and discuss Dewey's theory of intelligence in the context of the publications examined. This chapter also includes concluding remarks regarding the findings of this research, the implications for further research, and the limitations.

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[8] David Ridley's (2020) book *The Method of Democracy: John Dewey's Theory of Collective Intelligence* (see also my book review of it: Kauppi, 2021) may be seen as a recent exception to this, although its focus on arranging and administrating higher education differs substantially from the present focus.

2 Research questions and the process of inquiry

As described in the introduction, the main research question of this thesis is as follows: *How can John Dewey's philosophy contribute to our conceptions of intelligence in education?* The main question is approached through the following three sub-questions:

1. How to interpret the notion of social intelligence in Dewey's work, and what educational, societal, and political implications does it suggest?
2. How can educational problems that follow from neglect of context be structured and addressed utilizing Dewey's theory of intelligence?
3. How can Dewey's theory of intelligence contribute to contemporary educational practices in pursuit of a democratic society?

The sub-questions are addressed in three independent publications included in this dissertation, each of which will be summarized and discussed in Chapter 5.

The questions were formed during my process of inquiry, which was initiated by an indeterminate situation sparked by the mainstream conceptualizations of intelligence: They gave me a feeling that there were shortcomings and blind spots in how intelligence was framed, researched, and, accordingly, educationally cultivated. This feeling was in part due to Dewey's writings, first and foremost *Liberalism and Social Action* (1935), which seemed to offer a nuanced, complementary analysis of some aspects of intelligence, such as its cumulative social nature. A further reading led me to believe that a distinctive theory of intelligence could be reconstructed from Dewey's work, although it was not to be found there in any explicit sense. This took my focus to Dewey's notion of social intelligence and helped me formulate the first sub-question. Societal and political considerations featured alongside educational ones not only because they were of interest to both me and Dewey but also because the Original publication I was written while working on a project engaged in the theory and practices of citizenship in the contexts of sub-Saharan Africa.

However, the findings of the Original publication I resulted in more questions, especially regarding the role of context in intelligent action, which emerged in addition to the sociality of intelligence during the research process. A forthcoming thematic issue on the decontextualization of education offered a promising scientific community and a venue to further elaborate on the role of context in Dewey's theory of intelligence. It also helped me formulate the second sub-

question, taking the problems caused by the neglect of context in education as my vantage point.

Nevertheless, as the Original publication II was nearing completion, I felt that there was still a flagrant gap that needed to be filled. Both of my publications stressed people as a source of intelligence in Dewey's theory. However, it is clear that Dewey did not have in mind anything even remotely similar to the rallying cries of populist movements that ride on the simplified idea of popular knowledge while sneering at scientific knowledge and downplaying the political rights of some. However, if examined and presented carelessly, the optimism in Dewey's theory might be blunted into something similar, indeed a travesty of what his philosophy of education and democracy carefully elaborates. Such simplistic interpretations could also lead one to optimistically assume that we will solve all our societal problems if we just communicate enough to get all the intelligent potential articulated and heard. Dewey did not offer sheer optimism regarding people's intelligence; rather, he seemed to suggest that in order for his optimism to come to fruition, the conceptions of intelligence behind our educational theories need to be substantially revised—conceptions that in turn affect how we foster the enormous intelligent potential of people in education—in order to make our educational systems and societies more intelligent. This brought my focus to contemporary debates around democratic education and helped me in formulating my third sub-question.

3   Materials and methods

This research includes Dewey's work[9] from the years 1897–1938 (from his early work *My Pedagogic Creed* to his last major work *Logic: The Theory of Inquiry*)[10]. In order to reconstruct Dewey's theory of intelligence, the most important works, in chronological order, are as follows: *Democracy and Education* (1916), *Public and its Problems* (1927), *Liberalism and Social Action* (1935), and *Logic: The Theory of Inquiry* (1938). In terms of the original publications, I have mainly been interested in interpreting Dewey's own writings, not interpretations of them.[11] Israel Scheffler represents an exception to this as I rely heavily on his reading of Dewey in Original publication II, and he features in another (III). Scheffler (1923–2014) was a philosopher of science and education whose work built significantly on pragmatism and Dewey. In addition to his own contributions to the philosophy of education, we might also be thankful that he held onto a nuanced reading of Dewey's work.

The methodology employed in this research can broadly be termed philosophical analysis or, as described by Rescher (2017, p. 38), "rational conjecture based on systematic considerations." I have utilized conceptual analysis, complemented by argument analysis that "seeks to understand the structure of an argument; identify its presuppositions, implications, and any gaps it may have; and assess its validity or strength" (Coombs & Daniels, 1991, p. 39). Richard Rorty's (1984) thoughts of so-called *rational reconstruction* have been methodologically important to the process of this inquiry.[12] Rational reconstruction, as described by

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[9] The Original publication III also has a citation from Dewey's letter to his wife Alice from an earlier period: Apart from this exception, correspondence is not included in the research.

[10] As Festenstein (2008, p. 88) notes, "both John Dewey's longevity and the scope of his philosophy pose problems for the commentator. He was born before the American Civil War and died in the depths of the Cold War. His voluminous output includes work in epistemology, metaphysics, logic, the philosophy of mind, the philosophy of science, ethics, political philosophy, aesthetics, and the philosophy of religion."

[11] However, I wish to mention a few interpreters who have been sources of inspiration, if not points of reference: Sidney Hook (1982) and especially his defence of Dewey's thought against the accusations of Max Horkheimer; Hilary Putnam (1992) and his thoughts on Deweyan democracy and social justice; Horace Standish Thayer (1968) and the critical perspectives presented in *Meaning and Action*; and Joseph Ratner (1939) and his compilation of *Intelligence in the Modern World*, which opened an intriguing retrospect into Dewey's work in his own time and served as an initial guide at the beginning of this thesis.

[12] However, this dissertation does not share all of Rorty's interpretations of Dewey and might strongly disagree on some. Such disagreements include Rorty's anti-representationalist views (see Rorty, 1979; for a Peircean response to Rorty's critique, see Rydenfelt (2019); for other debates concerning Rorty on Dewey, see, e.g., Hickman (2019), Hildebrand (2019, 2020), Rondel (2011), and Westbrook (2005).

Rorty (pp. 49–56), is a way of revising historical philosophical writings in the context of today's questions and knowledge—questions that may be different and knowledge that previously did not exist. A rational reconstructor is interested in exploring what a particular philosopher might reasonably be thought to think had he or she been provided with the knowledge we now have and asked the same questions we now ask our contemporaries. Rorty (1984) calls this morbidly *re-educating the dead*:

> We are interested not only in what the Aristotle who walked the streets of Athens 'could be brought to accept as a correct description of what he had meant or done' but in what an ideally reasonable and educable Aristotle could be brought to accept as such a description. (p. 51)

The method employed sets the most concrete ethical guidelines for this research. My interpretation of Dewey's thought strives to be consistent enough that others engaged with his thought do not catch me putting words into his mouth through my interpretation, although certain disagreements may well occur. In the outcome of a rational reconstruction, it is the reconstructor's own original and additional work that is essential: It is not a summary or synopsis of the works done by antecedent thinkers. A rational reconstructor is interested in being inspired by the original writings and being taken further by them.[13] Such reconstruction is also in line with a central feature of Dewey's philosophy, that of reconstructing and contextualizing knowledge and ideas. In Garrison's (2008, p. 1) words: "Dewey was a philosopher of reconstruction. Those who claim to understand Dewey yet do not reconstruct him for their time, place, and purpose fail to appreciate what was perhaps his most profound message."

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[13] As Jaakko Hintikka (1996, p. x) cleverly writes about Wittgenstein's philosophy, "the only viable alternative to putting forward half-truths … is to put forward one-and-a-half truths about it."

4   Background: John Dewey's pragmatism

In what follows, I present a brief overview of Dewey's pragmatism. This chapter looks at the background information regarding the subsequent Chapter 5, which offers insights into Dewey's theory of intelligence through the original publications. I begin this task with a look at Dewey's contemporary discussions and reception, locating him in the course of history. This is followed by locating Dewey in philosophy[14]. I then discuss two intertwined concepts central to Dewey's theory of intelligence—science and inquiry—and conclude the chapter by discussing two omnipresent and cross-sectional themes in Dewey's work: democracy and education.

4.1   Locating Dewey in history

Dewey (1859–1952) lived his life in the United States of America, which underwent fundamental changes and was rather far from what we may conceive as the United States today.[15] In order to concisely locate Dewey as a historical figure, I turn to the contemporary discussions that he engaged in and the reception of his ideas in these discussions. In Scheffler's (1974, pp. 187–188) opinion: "In general influence and breadth of scope, Dewey was the giant of the pragmatists … actively engaged in a variety of causes that he judged to affect the prospects of intelligence and liberty." After receiving his Ph.D. from Johns Hopkins University, he worked at universities in Michigan and Chicago, finally settling in at Columbia University in New York for the remainder of his university career (Guinlock, 2021). He also

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[14] In my analysis, I am utilizing such philosophical–technical vocabulary as epistemology and ontology, although we seldom find Dewey himself discussing his views in such terms. This is indeed the sort of language he avoided, mostly because he saw these concepts as having been built on completely false dualistic premises of the internal knowing subject and the external object to be known. For analytic purposes, I hold that such concepts as epistemology can also be used in the case of Dewey, bearing in mind the limitedness of what we can express through them. As Larry Hickman (1990, p. 462) writes: "My suggestion, following Dewey, is that epistemic cross sections be treated just as biologists use their tissue samples. They do not think of them as ultimate reality, as independently existing objects with enduring essential natures, or as the 'building blocks' of biological organisms. They are instead regarded as no more than tools for the analysis of the living systems from which they have been taken" (for a discussion, see also Thayer, 1990).

[15] The fact that such a highly regarded public intellectual as Dewey could suggest socializing the forces of production "so that the liberty of individuals will be supported by the very structure of economic organization" (Dewey, 1935, p. 62) serves as testimony of how different the nation was in its formation—this is something that could not have been written in the United States two decades later without serious consequences.

lectured internationally, having a major impact especially in China (Festenstein, 2018, Dewey's political philosophy section, para. 4). As a public intellectual, he supported such causes as women's suffrage and other movements for social justice, including Jane Addams'[16] Hull House, a pioneering progressive settlement house that sought to improve the life conditions of the poorest and most marginalized groups in Chicago (Festenstein, 2018, Dewey's political philosophy section, para. 4). His political activities also included the presidency of the American Federation of Teachers, chairing the committee in defense of Leon Trotsky (whose ideas he opposed philosophically in many ways), support for the Outlawry of War movement, to mention a few: "Particularly after the onset of the First World War, a substantial part of his published output consisted of commentary on current domestic and international politics, and public statements on behalf of many causes, both domestic and international" (Festenstein, 2018, Dewey's political philosophy section, para. 4).[17] He published actively from 1882 until his death seventy years later, and his literary output consists of almost 40 volumes, excluding correspondence. Apart from taking part in public discussions (both academic and non-academic), Dewey was also engaged in such concrete activities as founding the Laboratory School in Chicago in order to create a connection between the theoretical competence of the University of Chicago and the everyday creativity of teachers in practice as well as to test his educational ideas in a unified school system that followed common principles from kindergarten to university (for a more detailed description, see e.g., Mayhew & Edwards, 1966/2017).

Dewey's widespread and long-lasting activity earned him a significant status in many areas of scientific and political life. Hildebrand (2018a, John Dewey section, para. 1) sums this as follows: "Dewey's educational theories and experiments had a global reach, his psychological theories had a sizable influence in that growing science, and his writings about democratic theory and practice deeply influenced debates in academic and practical quarters for decades."

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[16] Addams's immense influence on Dewey's thought, especially in societal themes, has been under recent study, and her importance is only beginning to be elicited: "Both John Dewey and his daughter, Jane, credit Jane Addams with developing many of his important ideas including his view on education, democracy, and ultimately philosophy itself" (Influences section, para. 21, with reference to Schlipp, 1951). Hamington (2019, Influences section, para. 20) also refers to historian Rosalind Rosenberg, who describes Addams as a "*de facto* adjunct professor at the University of Chicago" during Dewey's years there.

[17] Not all of Dewey's views are palatable for today's reader, such as "misjudgements concerning issues of diversity, geopolitics, and global justice" related to Turkish imperialism and the Armenian genocide (Papastephanou, 2016, p. 627), or some of his views on race, which have been contested (see, e.g., Margonis, 2009).

Although after his death in 1952 Dewey was momentarily promoted as "the guide, the mentor, and the conscience of American people" (Festenstein, 2008, pp. 87–88, as quoted in Commager, 1950), he was soon after viewed as "at best benign but woolly-minded" before the "resurgence of interest and respectability" (Festenstein, 2008, pp. 87–88) by the end of the century. Gonon (2000, p. 152) also points to fluctuations in the interpretations of Dewey in Europe: In the 1950s, he was referred to as "the leading representative of American leftist radicalism" in the German-speaking world, but right after 1968, he was subject to accusations of simply serving the establishment. In most European philosophic circles, pragmatism and Dewey were, in his time, largely neglected or only superficially examined, most notably by the so-called Frankfurt School (for more comprehensive accounts, see, e.g., Bruno-Jofre & Schriewer, 2011; Festl, 2021a; Ridley, 2020), whose reading[18] of Dewey saw him as a manifestation of modern American nihilism abolishing everything that is humane or dignified in philosophy.

Although Dewey became "America's most enduringly visible educational thinker" (Labaree, 2010, p. 163), his direct impact on the educational sciences and educational reality has remained rather limited,[19] or as Scheffler (1974, p. 190) has claimed, "in education … it is fair to say that his major ideas have been neither closely studied nor properly understood by the general public." Other discourses and philosophies took over, leading to such lamenting statements as Lagemann's (2000, p. xi): "One cannot understand the history of education in the United States during the twentieth century unless one realizes that Edward L. Thorndike won and John Dewey lost." In his article *How Dewey Lost* Labaree (2010) claims that this defeat was manifold, with his subtitle *The Victory of David Snedden and Social Efficiency in the Reform of American Education*. Although this dissertation refuses to present this as a game of win or lose, it seems apparent that the game is not yet over; in other words, it seems apparent that Dewey's extensive and systematic

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[18] One does have to wonder whether Horkheimer (1947, p. 50) had actually read Dewey or simply built on his own prejudices. For example, he wrote that "Pragmatism, in trying to turn experimental physics into a prototype of all science and to model all spheres of intellectual life after the techniques of the laboratory, is the counterpart of modern industrialism, for which the factory is the prototype of human existence, and which models all branches of culture after production on the conveyor belt, or after the rationalized front office."

[19] With the exception that many things we now see in the latest curricula (e.g., The Finnish national curriculum stresses the agency of pupils and the importance of their social environment, see Opetushallitus, 2014, p. 17) can be traced to Dewey' ideas—or some other progressive educationalist—as it is impossible to reliably track such ideas to any one person.

theories still have unexamined and unreleased potential to challenge some dominant views and discourses in education.

4.2   Locating Dewey in philosophy

Certain developments during Dewey's long career can be observed in his thinking. Godfrey-Smith (2002, p. 26) distinguishes three stages in Dewey's thought: He began as a kind of Christian/Hegelian idealist, then moved on to a rather classical form of pragmatism, and then to a naturalistic view. Godfrey-Smith also points out that "terminologically he was both eccentric and uncompromising" (p. 25). Additionally, "It is well known that Dewey's philosophy is complex and diverse and hence an object of constant reinterpretation" (Miettinen, 2006, p. 392). However, the ideas relevant to his theory of intelligence are, for the most part, characterized by consistency. The core elements are traceable throughout his work, although we may observe maturation and increased depth of analysis, for example, when comparing the kindred ideas in *How We Think* (1910), which targeted teachers, and *Logic: The Theory of Inquiry* (1938), which was written for a philosophical audience much later. It could be alleged that from the point of view of his theory of intelligence, Dewey managed to substantiate in his later works many of the things that were simply a matter of belief in his early works.

Dewey is here regarded as a pragmatist, as is commonly done, acknowledging that he sometimes preferred to call his philosophy instrumentalism, experimentalism, or cultural naturalism. However, placing Dewey under the broad school of pragmatism links his thought to other American scholars of the era, most notably Charles Sanders Peirce, whose pragmatist maxim (Peirce, 1877a) strongly influenced Dewey, among others, although their paths later diverged. Dewey and Peirce were both devoted proponents of a community of inquiry and science that uses "ideas put forth by individuals," a collective, "public and open method … to produce argument, unity of belief" to be "collectively tested and developed and, in the measure that it is cooperatively confirmed, becomes a part of the common fund of the intellectual commonwealth" (Dewey, 1936, p. 142; see also Peirce, 1877b). Although very different forms of thought developed under the name of pragmatism (see, e.g., Rorty, 2005), there are some commonalities, most notably the idea that knowing and action cannot be fully separated (Legg & Hookway, 2021) or, in other words, "their shared opposition to the correspondence theory of truth, and to 'copy theories' of knowledge" (Rorty, 2005, p. 838). Nevertheless, the different branches

of pragmatism have grown so far apart that it must be noted that as the ism is used in this dissertation, it refers to the Deweyan variant.[20]

As Robert B. Talisse (2017, p. 229, emphasis in original) notes, philosophical movements often "owe their influence not to their core doctrine, but to the distinctive vision of philosophy they embody. … they are *primarily* conceptions of *what philosophy is*." Talisse describes Dewey's metaphilosophical commitment as a "*sociological critique* of traditional philosophy," one aimed at mediating between traditional questions of philosophy and the completely new state of the modern world. The mismatch between these two, for Dewey, calls for a "wholesale *reconstruction* of philosophy" (pp. 237–238, emphasis in original). The problem, for Dewey, is in part caused by philosophers traditionally focusing on certain things while ignoring others. The primary question of *what is it that we want philosophy to do (and what is it that philosophy currently fails to do)* is addressed rather programmatically in *The Need for Recovery in Philosophy* (Dewey, 1917, p. 47): "Philosophy recovers itself when it ceases to be a device for dealing with the problems of philosophers and becomes a method, cultivated by philosophers, for dealing with the problems of men [sic]."

In Dewey's view, philosophy carries with it an inherited historical burden of intellectual, social, and conceptual debris—most notably that of the fixity of things rather than continuity and change and that of false dualist dichotomies such as mind/body, doing/knowing, nature/culture, individual/social, fact/value, and reason/emotion (Biesta & Burbules, 2003, p. 9; Hacking, 1983, p. 62; Hildebrand, 2018a, John Dewey section, para. 3; Talisse, 2017, p. 239). He considers these dichotomies to be in opposition to the findings of modern sciences, such as the emerging fields of psychology and neurology, and most notably Darwin's evolutionary theory that placed human beings as one organism within a continuum of other living organisms. As Festenstein (2008, p. 92) notes, "Dewey develops his conception of inquiry against the backcloth of a metaphysical vision of humans as embedded in an objectively precarious world and seeking a mode of activity which will allow them to overcome this precariousness." Fighting the dichotomies that he saw as harmful or false, as they did not fit the new understanding of humanity, is one of the main features of Dewey's work. His default method for this was "to conduct historical anthropology to explain how and why the dichotomy emerged

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[20] For instance, there is no doubt in calling Robert B. Talisse a pragmatist; however, I believe that he would regard it as an insult to link his thought with Dewey's (see, e.g., Talisse, 2010, *A Farewell to Deweyan Democracy*).

and then show how the seemingly intractable division could be eliminated" (Heldke, 2020, p. 284).

Epistemologically, this anti-dualism leads Dewey to what Biesta and Burbules (2003) call an anti-epistemology. Thus, if we take epistemology to be, as Biesta and Burbules (p. 9) suggest (with an emphasis on *if*), a "branch of philosophy that tries to give an answer to the question of how our (immaterial) mind can acquire knowledge of a (material) world," then the question is meaningless and built on completely false premises if we look at it from the point of view of Dewey's theory of knowledge. Dewey describes rejecting the mind/body dualism as the Copernican turn in philosophy, comparing it to the revelation of planetary systems not being an earth-centered constellation but, rather, a complex of interactions:

> Neither self nor world, neither soul nor nature (in the sense of something isolated and finished in its isolation) is the centre, any more than either earth or sun is the absolute centre of a single universal and necessary frame of reference. There is a moving whole of interacting parts; a centre emerges wherever there is effort to change them in a particular direction. (Dewey, 1929, p. 232)

No matter how we change the scale or scope, things are what they are in relation to their surroundings (Dewey 1927, pp. 351–352). This change of perspective, which Dewey also calls transactionalism, and Biesta and Burbules (2003, p. 11) describe as transactional realism, means that knowledge is a construct, though not a construct of human mind. It is a recurring construction located in the organism–environment transaction, leading to changes in both the organism and the environment, but it is based on a shared reality (Biesta & Burbules, 2003, p. 11). As Godfrey-Smith (2002) points out, for Dewey,

> A theory of mind is not a theory of the nature and role of a set of inner episodes. Neither is it a theory of the nature and role of the brain, or the brain plus a set of sense organs attached at one end and actuator devices attached at the other. (p. 27)

For Dewey, a theory of mind is a larger theory of active interactions of an organism and its environment: "All conduct is *interaction* between elements of human nature and the environment, natural and social" (Dewey, 1922, p. 9, emphasis in original). Thus, a theory of mind must include the social interactions as well as the meanings adopted or created through collective habits, communication, language, and conceptions that to a great extent exist before and after the individual mind (Dewey,

1916, pp. 282–283, 304–306; 1922, p. 218; 1927, p. 268; 1938, p. 481).[21] In such a frame, thought and knowledge do not passively spectate a pre-existing world; rather, they change it (Godfrey-Smith 2002, p. 28). Intelligence mediates in the remaking of the old through union with the new (Dewey, 1935, p. 37) in this web of interactions. This Copernican turn forms the basis of much of Dewey's philosophy, including his theory of intelligence.

This leads us to the question of Dewey's ontological position. In this dissertation, Dewey is doubtlessly regarded as a realist of some kind (see also Biesta & Burbules, 2003, p. 10), although this too has previously been debated (see e.g., Godfrey-Smith, 2002, p. 26; Hacking, 1983, pp. 61–62; Ryan, 1995, p. 83). This dissertation relies on two main interpretations, the first of which is that of Godfrey-Smith (2002, pp. 26–28), who describes Dewey as a representative of *scientific realism*, pointing out that Dewey's idea of thought changing the world includes the causal role of behavior, making it completely different from recent forms of anti-realism, such as social constructivism. Godfrey-Smith's view is of particular interest here; not only is it in line with my own interpretation of Dewey's ontology, it also builds on Dewey's notion of inquiry, which is of central importance to Dewey's theory of intelligence. Second, I rely on a Peircean ontology, which Rydenfelt (2019, p. 7) describes as *hypothetical realism*.[22] This take on realism also seems to be operating behind Dewey's thought. In short, we must assume that *there is a reality* to which we are variously bound, one that affects us and one that we can affect, but our knowledge of this reality is fallible—it is always a hypothesis. Nevertheless, our knowledge is the best we have; it is not just any old guess. This makes knowledge a continuous process of inquiry rather than an attained object. As Rydenfelt (2019, p. 9) points out, once we find a feeling of certainty in something, we should not close the inquiry: "That science may ultimately lead to such conclusions [of certainty] does not tell us how to go about inquiring—it only tells us to keep inquiring."[23]

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[21] This does not, however, imply strict linguistic relativity as Dewey would likely agree that our symbol systems are also limited by biological factors, such as the basic structures of our brains, as well as our physical surroundings.

[22] Hacking (1983, p. 63) sees Dewey representing a different kind of realism than that of Peirce. Why he thinks so, however, seems to be a response to Rorty's reading of Dewey. Implicitly, Hacking seems to link Dewey precisely to the Peircean version of realism.

[23] To put this in Dewey's (1938, p. 16) words: "The 'settlement' of a particular situation by a particular inquiry is no guarantee that that settled conclusion will always remain settled. The attainment of settled beliefs is a progressive matter; there is no belief so settled as not to be exposed to further inquiry. It is the convergent and cumulative effect of continued inquiry that defines knowledge in its general meaning."

If one wishes to continue examining Dewey using philosophical–technical vocabulary, there is then, in my interpretation, an epistemological position that we can attribute to him on the basis of this realist ontology—that of fallibilism. It is, as capsulized by Holma (2012, p. 397), "an epistemological position that presumes both the uncertainty (or fallibility) of human knowledge and the possibility of improving our current conceptions." Contrary to Cartesian doubt, fallibilism is not aimed at a wholesale questioning of the world: It holds that all our conceptions have to be open to criticism and revision but builds on most of our beliefs being legitimate to some extent (Festenstein, 2008, p. 93). We must operate in a shared and real existing world, basing our actions on conceptions that we have to believe to be true while keeping in mind that any of our conceptions may be proven wrong in interaction with reality—which again gives us an opportunity to improve our conceptions to better operate in that reality. This openness and revisability of knowledge expressed in fallibilism is, in Dewey's view, a common feature of both scientific inquiry and ideal democracy, and it is at the very heart of pragmatism (Margolis, 1998; Putnam, 1995, p. 200; Talisse & Aikin, 2008, p. 39).

4.3   Crucial concepts: Science and inquiry

Dewey's theory of intelligence builds on his views of a community of inquiry that forms the basis of reliable knowledge and science. There is no debate over whether Dewey was a proponent of science and a scientific worldview, but what this means has been debated and, especially in Dewey's own lifetime, misread (Dewey, 1934, p. 108; Hook, 1982). Dewey's view on science resembles his idea of the Copernican turn in philosophy, which turned attention from the mind and external world to the interaction of the two. In short, contrary to other ways of making sense of the world, scientific investigation is interested in relations and connections, not the intrinsic properties of things. As Godfrey-Smith (2002, p. 32) interprets Dewey, "Science will try to understand one thing by seeing how it is connected with others, seeing what interactions are characteristic of it, seeing how it will combine, attract, repulse, and transform." Dewey (1927, p. 238; 1935, pp. 51, 64) insists that the progress witnessed in technology through natural sciences results from following this scientific principle and performing experimental inquiries. In his view, the logic of science and experimentation was much needed but practically absent in the realm of social sciences (Dewey, 1935, p. 34). Nevertheless, herein lies the danger of misunderstanding: In saying this, Dewey does not insist that we apply the methods of natural sciences to social issues. He has been accused of having a positivist view

of science, which he has denied as complete misunderstandings. In his view, positivist premises of science prevent all the creativity of abduction that is necessary for science:

> [Positivism] inherited from traditional empiricism its contempt for general ideas and for theories that pretend to be anything else than summary records of ascertained facts. Its logic has no recognized place for hypotheses which at a given time outrun the scope of already determined "facts," and which, indeed, may not be capable of verification at the time or of direct factual verification at any time. (Dewey, 1938, p. 512)

What he insists on is an extension of the logic and premises, "the attitude of mind exemplified in the conquest of nature by the experimental sciences" (Dewey, 1934, p. 108) into social questions. This does not, however, determine the methods of science: "Scientific methods simply exhibit free intelligence operating in the best manner available at a given time" (Dewey, 1938, p. 529). Put another way, science is "intelligent action regulated by increasing methods, guiding principles and a community of inquirers, all proven to be useful in making sense of the world" (Original publication III, p. 223). The methods are cumulative and cannot be restricted in any narrow sense; the guiding principles include (self)criticality, self-correction, the social (rather than individual) and cumulative formation of knowledge, and "considering the realities in terms of cause and effect" and "the working causalities of nature" to produce knowledge to be utilized in "imaginative ventures of invention and construction" (Dewey, 1935, p. 52). The community of inquirers serves as a source of doubt, variation, and legitimation (Dewey, 1936, p. 142).

There is a great deal in this area of Dewey's thought that he owes to Peirce, especially his fallibilist epistemology (see also Festenstein, 2008, p. 93) and inquiry as an efficient way to function in this inevitable uncertainty. In *Logic: The Theory of Inquiry* (Dewey, 1938, p. 108), he defines inquiry as "the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole." Although scientific inquiries are generally more regulated than other types, for Peirce and Dewey, the concept of inquiry does not refer only to scientific inquiries. As Anderson (2008, p. 42) writes, the "process [of inquiry] led from existential doubt to hypotheses (abduction) to predictions (deduction) to testing (induction). The process was observational and experimental and, as Peirce quickly noted, it was the basis for all learning and education." By the

same token, for Dewey (1938, p. 106), inquiry refers to a wide continuum of intelligent problem-solving as a common feature of both everyday problem-solving and scientific experiments. There is a great deal of room for openness and creativity in Dewey's (1917, p. 43) philosophy of science: "A pragmatic intelligence is a creative intelligence, not a routine mechanic." It operates logically but not only through induction and deduction; it also utilizes the imaginative ventures opened through the possibility of abduction.[24]

Successful inquiries—scientific or common sense—are manifestations of intelligence. They both follow a pattern of inquiry, which Dewey presents in various ways, most notably in *How We Think* (1910) and *Logic: The Theory of Inquiry* (1938). Based on the abovementioned works by Dewey and Ridley's (2020, p. 44) summary of them, we present Dewey's pattern of inquiry in Original publication II as follows:

> Dewey's pattern of inquiry may be presented (with a slight risk of oversimplification) in five phases as follows: The first phase is the *indeterminate situation*, feelings of disturbance, ambiguity, conflict, or doubt as the situation emerges. The second phase is the *problematic situation*, as a problem is shaping on the basis of previous experiences. Mode of experiencing begins to shift to that of knowing and observation, as action is suspended and reflection prompted. The third phase is that of *suggestions*, as suggestions of how to deal with the situation spring up. Ideas begin to form, to organize facts, data, and/or objects through signs and symbols. Reflecting on and further examining the conditions of the situation and possible actions taken result in new ideas, which in turn bring new facts, data, and/or objects to light. The fourth phase is that of a *hypothesis*, as a plan of action is created. This plan remains open to revision, in light of following experiences. The fifth phase is that of *testing*, where the plan of action is executed and tested, and if successful, the outcome is both learning and growth, foresight expanded for similar problems in the future. Reflection and action do seldom proceed

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[24] As Godfrey-Smith (2002, p. 32) puts it, "Dewey thinks that science tries to describe instrumental properties, and these properties are practically important. But he does not think that decisions within science are made on the basis of specific practical goals and demands. He thinks the opposite; empirical inquiry that is directed and constrained by immediate practical goals is not science at all."

straightforwardly as in the pattern, and it is usually necessary to shift back and forth between phases in some points of the inquiry. (p. 223)[25]

This pattern of inquiry also applies to moral questions: "Moral principles are real in the same sense in which other forces are real; that they are inherent in community life, and in the working structure of the individual" (Dewey, 1909, p. 291). As Dewey (1938, p. 496) notes with reference to inquiries concerning complicated social matters, we cannot assume ends and values outside of scientific inquiry so that scientific inquiry is then "confined to determination of the means best calculated to arrive at the realization of such values." Ends and values can be validly determined "only on the basis of the tensions, obstructions and positive potentialities that are found, by controlled observation, to exist in the actual situation" (p. 497). We can take our relationship with other animals as an example of such a case where we must utilize our intelligence in moral matters. The reader today is often repelled by parts in medieval literature where descriptions of animal mistreatment are intended as humor and entertainment (e.g., in Don Quixote)—quite contrarily, many of us now question, for example, our right to eat meat as it causes suffering to animals. Biologically, we have not changed much in comparison to other animals, but our moral relationship has (possibly due to our increased *understanding* of biology), and we need to use our intelligence for the remaking of the old through union with the new.

4.4   Central themes: Democracy and education

There are two recurring and strongly intertwined themes central in Dewey's work that are discussed below from within the framework presented earlier. The first theme is *democracy* in its manifold forms, and the second is *education* as the stronghold needed to defend, foster, challenge, and strengthen democracy. It is noteworthy that Dewey's 1916 work *Democracy and Education* (which he then regarded as the most comprehensive summary of his philosophy) presents an analysis of the history of philosophy, psychology, ethics, politics, art, logic, and the philosophy of science (see, e.g., Alhanen, 2013, pp. 272–273)—yet he named it after the two overriding themes.[26]

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[25] The choice of words for the phases employed here is from Dewey's *Logic: The Theory of Inquiry* (1938). Very similar ideas were also expressed in rather different terms by Dewey, for example, in *Democracy and Education* (1916, p. 157) as well as in some of his other works.

[26] The excellence of the magnum opus is contested by many who, nevertheless, appreciate some of Dewey's views. For example, Biesta (2019, p. 113, with reference to Ryan, 1995, p. 81) notes that: "the

For Dewey, democracy does not denote an existing form of democratic or allegedly democratic rule. Rather, it is a constantly evolving and never fully accomplished ideal of people making the decisions that concern their lives and those of their fellows: "A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience" (Dewey, 1916, p. 93). For example, Rydenfelt (2021, p. 244) interprets the pragmatist version of democracy as a shared social inquiry, an experiment that includes the experience of all the members of a society to provide data on what the problems are, how to possibly solve them, and evaluate the consequences of the possible or actual solutions. Ridley (2020, p. 39) also points out that Dewey provides us with a methodology for democratic knowledge production, not a model of democracy. However, this methodology needs education in order to be actualized: The virtues and methods of democracy need to be learned and trained. Of course, they can be, and they are, learned in the interactions of everyday life, but among the institutions of society, it is the school that may promote them effectively (if fundamentally reconstructed).

It is through education[27] that societies both transmit and reform traditions, habits, and dispositions. Education is "the process of forming fundamental dispositions, intellectual and emotional, toward nature and fellow men" (Dewey, 1916, p. 338), and it gives us a possibility to revise and improve them gradually and collectively. As Dewey stated as far back as 1899 in *The School and Society*: "All that society has accomplished for itself is put, through the agency of the school, at the disposal of its future members. All its better thoughts of itself it hopes to realize through the new possibilities thus opened to its future self" (p. 6). The connection between democracy and education, however, does not mean that we can simply bring democracy into classrooms (as the very nature of Deweyan democracy questions the possibility of identifying a universal model for democracy) or turn the classroom or school into a miniature society, although such

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book where many would expect to find clear answers [to the question of the relationship between democracy and education] – Dewey's 1916 Democracy and Education – actually 'yields rather few,' as Alan Ryan has put it." For critical remarks on the insufficiency of the views presented in *Democracy and Education*, see also Garrison, Neubert and Reich (2016, pp. 173–194), and Oelkers (2000).

[27] Scheffler (1974, pp. 189–190) points out that unlike many philosophers, Dewey did not consider educational questions as "a separate realm to which a theorist ought occasionally to devote some time, as a matter of moral obligation or citizenship"; on the contrary, he saw them as fundamental questions of all philosophy.

interpretations are not unheard of.[28] For Dewey, society as it is serves as the material for educators to inquire with those educated; it is the concrete context of our educational actions, but it is not an ideal to be sought after or adopted, nor does education try to solve all the problems of the present (see Original publication II, p. 393). Society as it is serves as the material to train the skills and dispositions needed in an unknown future world whose problems we do not yet know. To solve social problems, Dewey (1935, p. 57) maintains that there are ultimately only two options: either intelligent democratic cooperation or brute force.

For him, the aim of both education and democracy is to enable further growth (Dewey, 1916, p. 107; 1920, p. 186). Growth is a continuous process; it is action that enables more possible options for actions in the future and, thus, further growth. In Dewey's (1916, p. 107) words, "the aim of education is to enable individuals to continue their education—or that the object and reward of learning is continued capacity for growth." As Hildreth (2009, p. 796) points out, growth is a normative concept, but it is anti-foundational. It is normative as it is the desired outcome of our actions, but it is anti-foundational as it cannot be predetermined by any fixed fundamental ends, values, or principles other than growth itself. Rather, different ends, values, and principles need to be evaluated according to the situation or context of action. In Dewey's (1916, p. 107) view, only a democratic setting can fully enable growth: Other kinds of societies are bound to hinder or suppress the growth of at least some of its members; only a democratic setting is capable of both "the effective release of intelligence in connection with personal experience" (Dewey, 1937, p. 220) and the securing of the further growth of its constituents. In Festenstein's (2008, p. 104) words, "my growth or flourishing is mutually interdependent with yours, and requires that you are able to exercise pragmatic intelligence in the making of collective decisions on the same footing as me."

Dewey's philosophy is not, in my interpretation, based on a belief in democracy or its epistemic advantages (cf. Anderson, 2006), but the basis of his belief in democracy lies in his implicit theory of intelligence. He does indeed argue that democracies provide "more numerous and more varied points of shared

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[28] Such an interpretation can easily be challenged using at least two arguments. First, acknowledging the pedagogical inequality present in most educational settings and the responsibility that follows, it would be a bad idea to expect unsovereign minors to take on many of the responsibilities, duties, and other tasks required in democratic decision-making as the ability to take them is in the stage of development. Second, it seems unlikely that there would exist even a single person so conservative as to maintain that a given society is the best society possible, that there is nothing to improve in it, and that it needs to be transmitted to future generations unaltered—that is, education strives for a world improved.

common interest" and "greater reliance upon the recognition of mutual interests as a factor in social control" (Dewey, 1916, p. 92) and that "the plurality of alternatives is the effective means of rendering inquiry more extensive (sufficient) and more flexible, more capable of taking cognizance of all facts that are discovered" (Dewey, 1938, p. 500). However, intelligence, if conceptualized in Deweyan terms, is always situated and contextualized (in good and in bad); it is active, agile, and adaptive and includes individual variation. What is more important is that intelligence is socially cumulative and manifests in social practices, and because of this, *it is also possible to deliberately and consciously develop it* and, thus, develop democracy: [29]

> The foundation of democracy is faith in the capacities of human nature; faith in human intelligence, and in the power of pooled and cooperative experience. It is not belief that these things are complete but that if given a show they will grow and be able to generate progressively the knowledge and wisdom needed to guide collective action. (Dewey, 1937, p. 219)

In short, democracy can learn, as the people at its core are naturally intelligent through their experience and capable of learning through shared experiences.

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[29] See also Landemore (2012, p. 82): "Dewey took seriously the epistemic competence of people and, at the same time, called for educative reforms meant to improve that competence."

5 Arguments and analysis: Summarizing the original publications

This chapter presents summaries of the arguments and analyses from the three original publications of this dissertation. The original publications are included in full length in the printed version of the dissertation, but not in the electronic version of it. An English translation of the second publication that was originally published in Finnish is provided in the Appendix of this dissertation. Each of these publications presents an insight into Dewey's theory of intelligence, mostly from an educational perspective, although societal themes are also present in all of them. The views presented are then discussed in the concluding Chapter 6.

5.1 John Dewey's notion of social intelligence

The Original publication I approaches the main research question *how can John Dewey's philosophy contribute to our conceptions of intelligence in education?* through the sub-question *how to interpret the notion of social intelligence in Dewey's work, and what educational, societal, and political implications does it suggest?* It was published as a book chapter in *Practices of Citizenship in East Africa: Perspectives from Philosophical Pragmatism* (Holma & Kontinen, 2020) and written in collaboration with the editors of the book. The book was an outcome of a multidisciplinary project between Finnish, Tanzanian, and Ugandan universities and researchers and was published in the series Routledge Explorations in Development Studies. In the chapter, we analyze Dewey's notion of social intelligence and argue that his view of the sociality and contextuality of intelligence and his notion of the neglected intelligent potential of ordinary people should be taken into account when dealing with citizenship and learning.

The chapter begins by distinguishing two lines of critique by Dewey regarding intelligence. The first is a critique of individualism, understanding intelligence solely as a feature of an isolated individual. The other is a critique of conceptions of intelligence as an elite possession. We then present the problem: Building universal guidelines for intelligent action based on the abovementioned (mis)understandings is bound to fail in one way or another. The chapter then proceeds in two parts: The first part outlines the notion of social intelligence in Dewey's philosophy, while the second examines some of the implications of that notion, with an emphasis on the themes of the book.

Building on the two lines of critique, Dewey argues that the individual/social dichotomy is a dangerous one as it leads to an atomistic view of human beings as acting in isolation. However, he claims that there is nothing that we can identify as discrete, aloof, or detached from the endless network of its interactions with its surroundings—things are what they are in relation to their surroundings (Dewey, 1927, pp. 351–352). This does not ignore the existence of an individual or their environment, but based on Dewey's conception, we suggest that both could be better understood if examined through their connections and interactions rather than as isolated things. Dewey's conception of intelligence also refuses to regard it as an individual possession. He points out that we only become conscious centers of experience in contact with others: Intelligence develops through individual experience in a cultural matrix of social relationships, practices, and interdependencies; it operates and has value within this social frame (Dewey, 1916, pp. 282–283, 304; 1938, p. 481). In the inseparable connection of individual experience and the surrounding world, it is intelligence that functions as the organizing factor: It is the office of intelligence to modify old habits in order to meet the new conditions (Dewey, 1920, p. 132; 1935, p. 37).

Linking intelligence with the social, that is, community life and habits mediated in it, presents intelligence as a highly culturally and historically cumulative phenomenon. "Individuals may join the intelligent social action at hand, and also engage with the previous achievements of others, taking those achievements further, in a way that would not be possible for any individual alone" (Original publication I, p. 47). It would appear that creating conditions for intelligence to flourish ensures a better functioning society that in turn gains from the growth of its members and their capability to engage in shared intelligent action. The potential intelligence that the environing society may provide can be transmitted through education, instruction, and communication. As a conclusion, we maintain that conceptualizing intelligence as fundamentally social, as Dewey does, provides us with a rather different yet undoubtedly reasonable framework for analyzing and developing communities and societies.

We then turn to reflections on the implications of Dewey's theory. The first reflection concerns the contextuality of all theorization. If we conceive intelligence as the organizing factor in a situated experience, we must give up on trying to find universal wholesale solutions in philosophy and take the inevitable contextuality of intelligent action seriously. As Dewey (1917, p. 45) points out, "intelligence develops within the sphere of action for the sake of possibilities not yet given." Therefore, it could be alleged that aiming at wholesale solutions fails in

determining the actual sphere of action as well as in opening up new possibilities beyond our present imagination.

The second reflection builds on the first and concerns expert-based knowledge. Dewey has at least two major arguments against an elitist conception of intelligence (and democracy) whereby well-informed experts make the best decisions for the masses. First, he (1927, p. 268) points out that "The combined observations of a number cover more ground than those of a single person" but that, second, "A class of experts is inevitably so removed from common interests as to become a class with private interests and private knowledge, which in social matters is not knowledge at all" (1927, p. 364). Instead, we need socially informed inquiries that are specific and detailed. In order to understand problems in depth, we need to take into account people's experience-based knowledge. Dewey points out that people are, indeed, rather intelligent regarding their own life situations and that the danger of the failure to see the intelligent potential embedded in everyday habits is that we do not get a sufficient picture of the totality of the problem as some pieces of the puzzle are missing. In order to make all human potential flourish, we must make use of the intelligence of actual lived experience. This does not exclude specific expertise and expert knowledge; however, to solve contextual problems, we need experience-based knowledge from everyone to inform the experts. Our third reflection is a follow-up on the second, with the suggestion that in order to build better societies, the social inquiries that engage experts and people's contextual experience-based knowledge must follow the core principles of scientific inquiries and experimentations. These principles, Dewey (1927, p. 238; 1935, pp. 51, 64) argues, are behind the material and technological progress of human history, whereas social policies, he claims, have mostly been formed based on generalizations that obscure knowledge of specific situations.

The fourth reflection is an educational implication of a Deweyan pragmatist approach to democratic decision-making, that of *social inquiry* (which may be seen as differing from both elitist and deliberative takes; the theme is more thoroughly examined in the previous chapter of the book, see Rydenfelt, 2020a). In order to extend scientific inquiry into social matters, we need to learn the habit of scientific inquiry at school and in every branch of study to explore the relations of the world and provide learners with the power of re-adaptation in changing conditions. Here again, however, we need to take seriously the idea of contextualized everyday intelligence and knowledge. Educational systems are bound to fail if they imagine that they already have the solutions to every problem and that they simply need to be delivered to recipients without further inquiry. Intelligence is also produced to a

great extent outside formal education, and many without access to schooling are highly intelligent, especially in regard to understanding their own life conditions. This intelligence also needs to be acknowledged in formal education. Looking at the societal level, an enormous potential is wasted if educational systems do not acknowledge the intelligence manifested in the habits and actions of its members.

We then conclude the chapter by contending that Dewey's notion of social intelligence provides an additional conceptual angle to understanding citizenship and learning. It challenges "the idea of independent and isolated human beings in individual possession of different degrees of intelligence, who, based on this intelligence, make deliberate choices as members of human communities" (Original publication I, p. 51). Thus, it inspires a shift in the focus of analysis, pointing toward social practices such as institutions, habits of association and communication, and shared problem-solving that produce intelligence. These points are worth considering when conducting empirical studies on citizenship and learning as well as in planning and carrying out action aimed at strengthening societies and communities. To conclude, we summarize what this would mean in the context of the book with its focus on educational interventions to strengthen citizenship in sub-Saharan Africa: 1) embarking from the contextual experience of local people; 2) acknowledging the knowledge of those without formal education but, nevertheless, in possession of extensive experience of everyday problem-solving; 3) initiating social inquiry into problems that people consider relevant to their situations; and 4) appreciating everyone's participation in educational initiatives.

5.2 The contexts of intelligent action: A Deweyan approach to decontextualization in education

The Original publication II analyzes the sub-question *how can educational problems that follow from neglect of context be structured and addressed utilizing Dewey's theory of intelligence?* The article participates in the contemporary Finnish discussion on the decontextualization of education and is written with the Finnish formal education in mind, although many of the issues discussed are also relevant to other similar settings. It was published in a 2021 thematic issue on the decontextualization of education in *Kasvatus* [Education], under the title *Älykkään toiminnan kontekstit: Deweyläinen näkökulma kasvatuksen dekontekstualisaatioon* [The contexts of intelligent action: A Deweyan approach to decontextualization in education]. The article expands the themes of the Original publication I. It

structures and analyzes the problems of decontextualization in education through Dewey's theory of intelligence, pointing to at least three distinct forms or fields of decontextualization—social decontextualization; the decontextualization of knowledge; and the societal decontextualization of education—all harmful for education as they threaten to make education unintelligent.

The article begins by introducing the distinctive features of Dewey's theory of intelligence. As Dewey (1935, p. 37) sees it, "The office of intelligence in every problem that either a person or a community meets is to effect a working connection between old habits, customs, institutions, beliefs, and new conditions." Thus, intelligent action requires assessing the situation, defining the problems, and utilizing solutions that have previously been successful—but no action is intelligent per se. Rather, intelligence needs to be understood as a process that "requires constant alertness in observing consequences, an open-minded will to learn and courage in re-adjustment" (Dewey, 1920, p. 135). As Bernstein (2006, p. 172) notes, for Dewey, intelligence is not simply rationality; through human experience, our intelligence is also informed by our desires, feelings, and passions.

The article proceeds by looking at how Finnish authors Simola (1998, 2015) and Saari (2016) use the concept of decontextualization as an umbrella term for certain negative developments in educational systems, such as the dominance of individual psychology or the attempt at constructing a universal school-free pedagogy that would function uniformly in any given context. For them, decontextualization means observing something without noticing something crucial in its contexts. In so doing, the overall picture of that something is lost or significantly distorted. I then continue with a reconstruction of a Deweyan take on decontextualization by noting that the term also has meanings other than those attributed to it by Simola and Saari. Within the tradition of cultural-historical psychology, decontextualization is used rather similarly to the concept of transfer in educational psychology: We abstract something from one context and use it in another. This is noteworthy as Dewey's work is characterized by the dilemma of these two forms of decontextualization. For Dewey, it is the two sides of the same coin: We need to be able to abstract knowledge from one context to another in order to function intelligently, but at the same time, this decontextualization carries with it the risk of unintelligent action based on overly generalized or false assumptions. Our knowledge is context-bound because it is both gained and utilized in particular contexts. In our quest for universally fit habits and theories, we may lose sight of the problems and solutions arising from individual and temporal experience that gave substance to these habits and theories. I then claim that it is possible to

distinguish the three above-mentioned fields of decontextualization in education on the basis of Dewey's theory of intelligence. These fields are then discussed in their own sections.

The field of *social decontextualization* is closely related to a larger and prolonged critique of individualism. I briefly examine some of the main themes of my previous publication: the harmful idea of an individual separated from her environment; individuals forming and gaining consciousness in interaction with their social reality and its meanings; individual variation as a source of imaginative alternatives yet operating on concepts and categories that are formed and adopted socially; and despite all this, everyday conceptions presenting intelligence as an individual possession. What follows from the idea of a socially decontextualized individual is that her actions are misperceived in social sciences, economics, and educational sciences, to name a few domains. As Dewey (1930, p. 78) notes, such a view presents economic profit as the primary individual motive, making the individual and social antithetical. While there is nothing wrong with profit, if we subscribe to Dewey's position, we face the danger of problems being solved (and taught to be solved) on the grounds of personal profit, making both individuals and communities act unintelligently in the long run.

Dewey (1935, pp. 43–44) points out that it is no longer a scarce nature that poses the problems that we face: They are mostly manmade, and how to solve the problems is also up to humans to solve collectively. This applies to such examples as climate change or global poverty, which are mostly caused unintentionally, indirectly, and most of all collectively. A crucial task for the school, therefore, is to help the person that is being educated "to emerge from his original narrowness of action and feeling and to conceive of himself from the standpoint of the welfare of the group to which he belongs" (Dewey, 1897, p. 84). The school cannot solve all the problems of a society, but it may help in perceiving, diagnosing, and solving shared problems by examining how these problems manifest from other people's points of view and experiences—what are the backgrounds of the problems and their relation to other phenomena; why are they shared and not individual problems; what solutions may we consider; and what possible consequences do the considered solutions have?

Dewey's theory of intelligence also presents a challenge to the prevalent idea of highlighting individual intelligent perfection and paying little attention to collectively built contexts (such as schools, science, and material and immaterial technology) that practically enable individual geniuses. No one gets far simply because of their own individual intelligence; personal endowments and knowledge

gained through experience can only be utilized as a member of a community. Without denying the possibility of individual differences in intelligence, Dewey (1927, pp. 366–367) alleges that we should not focus on developing individual intelligence but, instead, on the social contexts that enable increased intelligent action without improving anyone's original endowments. Strengthening these contexts is crucial for educational planning, and making them visible is a crucial task for education. In Dewey's (1927, p. 329) view, such actions would form a basis for solidarity, communication, and cooperation. However, this does not mean that we must take solidarity and cooperation as desired ends per se: If they are taught without a critical analysis of the interdependencies and power relations of the social structures that affect those in education, we only teach adaptation and resilience, which do not change the world for the better.

The second field, *decontextualization of knowledge*, follows from educational practices that seek to enhance the intelligence of those being educated by offering decontextualized contents and habits projected as knowledge. This knowledge is then expected to automatically translate into intelligent action. However, as stated in the Original publication I, education cannot be a one-way process of offering readymade intelligent solutions. In the core of Dewey's philosophy, everybody wins if we provide resources for intelligent cooperation, such as education, but it does not follow that educational practices as they are would automatically be highly intelligent. What Dewey criticizes is an idea of knowledge that is relevant in all situations and the idea that absorbing such knowledge automatically leads to intelligent action (and that education could be planned on the basis of some universally translatable data). Knowledge is always context-bound, and utilizing it in another context requires readjustment, which is intelligence.

Decontextualizing knowledge makes some form of knowledge absolute, while another may be looked down on. This is often done on the basis of societal power relations, not on the basis of how the knowledge actually enables intelligent action. Despite this, Dewey (1916, p. 304) deems it obvious that people are also intelligent in regard to their own life problems, even if these problems do not appear as intellectual ones. Holding onto the tradition of decontextualized knowledge, education dims the societal power relations that give some action an intelligent status. This in turn leads to separating people for certain tasks by class background, neglecting their intelligent potential—it promotes social settings in which a seemingly intelligent elite rules seemingly unintelligent masses that work for someone else's short-sighted interests without the possibility of realizing their intelligent potential (Dewey, 1916, pp. 268–269, 325–329; 1930, p. 104). Thus,

Dewey (1909, pp. 270–271; 1916, pp. 225–226, 324, 328–329) sees that it is a crucial social task for education to examine power relations and make interdependences visible in order to enable those who are being educated to be responsible realizers of their own goals. Without such a critical examination, education can only blindly and unintelligently follow given traditions (and the power structures that come along with the traditions, which are often harmful to some).

In seeking concrete ways to dismantle the problems of the field of decontextualized knowledge, Dewey (1899, pp. 13–15; 1916, pp. 225–229; 1935, p. 52) suggests strengthening historical–societal understanding and scientific thinking in schools as they both provide ways in which to train intelligence. Readymade, context-free solutions cannot be drawn from history; however, problems, their contexts, solutions, and moral consequences can be better examined in retrospect. Furthermore, the achievements of science should be seen and taught as creative solutions to certain contextual problems, including in relation to their origins and application in other contexts. Thus, although the findings of science are of utmost necessity to intelligent action, and its methods can be useful to such action, it is even more important to embrace the logic and principles of science, not any specific methods or end products of it.

The third field of problems, *societal decontextualization of education*, results from education having an ambiguous relation with the rest of society. Considering the contextuality of all intelligent action, in order to understand and intelligently implement education, we need to view it comprehensively in relation to its societal contexts. However, this has often been misunderstood so that the contexts, most notably industry and economy, need to enter and guide education, thereby replacing the ethics of education with that of the economy in educational questions (Alasuutari & Lampinen, 2006; Kiilakoski & Oravakangas, 2010; Masschelein & Simons, 2013; Miettinen, 1990; Värri, 2006). Looking at education through such instrumental rationality endangers its autonomy and has widespread negative consequences.

In *The School and Society*, Dewey (1899, p. 44) pointed out that we need to look at the school system "as part of the larger whole of social life," which does not mean bringing the norms and practices of other areas of society into schools. These norms and practices are bound to their own (also temporal) contexts, whereas the scope of school is beyond these contexts—in an unknown and unpredictable future for which we cannot possibly yet have the best readymade solutions to just pass on. We cannot operate based on impossible utopias, but what seems to be the

best (or satisfactory) solution to a problem right now cannot be our default future goal. Equipping pupils with physical and social resources that allow them to release their intelligent potential through experimental action will help them in the future to form and develop communities capable of responding to the yet unknown challenges of the future (Dewey, 1927, pp. 360–361). Dewey points out that our imagination is not capable of finding all possible solutions or the best possible ones. Thus, ends, values, and solutions that are fixed and cannot be questioned (and, if needed, altered) will ultimately prevent us from finding the best possible ends and values (Dewey, 1917, p. 20; 1920, pp. 134–135; 1927, p. 366).

Building on Dewey, Scheffler (1973) takes this further in his philosophy of education. He argues that if we take education as the instrument for the realization of fixed social goals, we endanger the ideal of a free and rational society, regardless of how worthy the goals are assumed to be, for their fixity prevents the very idea of critical scrutiny that school should foster (p. 134). Decontextualizing the goals of education thus poses two obstructions to intelligent action. First, these goals may be elevated to goals *as such*, and they may be sought after, even if the reality that made them worth striving for no longer exists; there is no space for intelligence to build the connection between the old and the new. Second, and perhaps more importantly, fixed ends and goals prevent open discussion on and inquiry into ideologies and values as part of education (see Holma, 2018; Scheffler, 1973, pp. 27–29). Understanding the contexts of values and ideologies is crucial if we want to act intelligently in these contexts.

Open ends do not, however, point toward aimlessness or relativism in education. In Dewey's (1935) definition of the office of intelligence, values and ideals are necessities in our actions, and they need to be examined openly and critically (albeit without a wholesale rejection of them) in order "to effect a working connection between old habits, customs, institutions, beliefs, and new conditions" p. 37). A crucial point of action for education is to bring together factual knowledge and social and moral questions and not present them as separate realms. I argue that if we educate the habit of combining factual elements with moral questions in inquiries, we will educate people who will be capable of reorganizing societal power relations in a premeditated manner, even if their views are in contrast with some prevailing practices. Society as it is presents the context for education, but it should not try to permeate it as such: It is the working material for education that is on its way to a different and consciously improved society. However, knowing the contexts of action will always be necessary because, in the unknown future, we will also have to judge things based on our best understanding of the current

situation (including current values). The school should, thus, train examining the present and the possible actions that open in it so that the present situation can be examined thoroughly, even when it has changed.

In the conclusions of the article, I reflect on the views presented in other recent educational debates. For example, the much-hyped issue of the export of Finnish education contains features of what Dewey calls building a railway in general, that is, regardless of geographical, social, or economic facts. Also, the common talk of fixed competences to be attained through education looks rather problematic, as goals determined under overly high conditions of precision neglect the need for wide-ranging attitudes and habits needed in complex problem-solving. In addition, such international educational norms as the 21st century skills (see Organisation for Economic Co-operation and Development, 2018) become questionable in their pursuit of universal solutions to specific questions and their belief in the capability of these solutions to bear the test of time. Such skills, attitudes, and capacities, which are regarded as useful in the eyes of industry and economics, are not only temporal but also contain concealed elements of exercising societal power, although they may hide their values and ideologies as seemingly neutral facts (for Finnish analyses of the theme, see, e.g., Harni, 2015; Rinne, 2008; Rinne, Kallo & Hokka, 2004; Saari, Tervasmäki & Värri, 2017), thus complicating their critical examination. This may also prevent the improvement of future societies if this improvement is against the interests of those exercising power. Pre-fixed objectives are also self-fulfilling predictions as they exclude alternative futures and the means for arriving at them.

I conclude by pointing out that we cannot get very detailed *teaching* guidelines from Dewey. The reason is obvious: Intelligent action, including intelligent education, is always context-dependent, and perfect universal solutions are impossible. However, we do get certain principles from him: that education needs to be conscious of the concrete social world around it; that we need to recontextualize our conceptions constantly; and that the world may and will change—indeed, it can be consciously changed for better.

5.3   Discussion and inquiry: A Deweyan perspective on teaching controversial issues

The Original publication III responds to the following research question: *How can Dewey's theory of intelligence contribute to contemporary educational practices in pursuit of a democratic society?* It was written in collaboration with Professor

Johannes Drerup (VU Amsterdam/TU Dortmund) and published in the journal *Theory and Research in Education* in 2021. It was largely inspired by current debates of democratic participation in both the philosophy of education and in more general public debates in traditional and social media. Political activity and participation in public discussion are commonly considered positive aspects that strengthen democracies, but what if the activity and discussion are based on discriminatory principles or crucially non-factual worldviews, and ignore the political rights of others? Like current deliberative theories of democracy, Dewey's philosophy also relies on the intelligence of the public as the source of intelligent decisions in a democracy. The process of inquiry for the Original publication III began with an intuition that Dewey's philosophy might contain educational insights that help actualize intelligent potential in a way that does not feature in other current theories. Education dealing with controversial issues for which pre-packaged solutions cannot be found presented a great opportunity to experiment with Dewey's theory of intelligence in order to overcome the flagrant gap mentioned in Chapter 2. The Original publication III set out with the problematics of discussion as a current educational ideal to settle societal disputes; it ended up arguing that we need to pay attention to various aspects of making sense of the complexity and plurality of the world, including the details that make up the controversy, in order to make the most of the contextualized and situational intelligence of people.

Current democratic theories highlight the importance of democratic education in regard to a vibrant democratic culture and a critical public sphere, the collective processes of democratic will-formation and self-determination. Within the theoretical framework of democratic education, discussion is considered the democratic practice par excellence and is valued both intrinsically and instrumentally on the basis of empirical assumptions of its benefits, such as civic engagement, the development of tolerance and respect, and the acceptance of pluralism (Hess, 2009; Hess & McAvoy, 2015). The link between public discussion and a healthy democracy is a strong one:

> Democratic education can be understood as the cultivation of the capacities, dispositions and attitudes necessary to engage in political debates in an appropriate and informed way, as well as an initiation into the practice of giving and asking for reasons in contexts of democratic deliberation. (Original publication III, p. 214)

Rational deliberation of controversial political issues in schools and classrooms and learning to live with disagreement and dissent related to it are regarded as central practical means for this cultivation and initiation.

However, not any type of discussion is regarded as suitable, and the risky enterprise of fostering successful discussions on controversial issues needs appropriate preparations from teachers. Within both democratic theory and democratic education theory, there have also been critics emphasizing the problematic consequences and unintended side effects of collective deliberation processes, such as increased polarization as a result of heated political discussion (Brennan, 2017; Talisse, 2019), challenging the plausibility of the classic formula that more discussion of controversial issues leads to more participation and, in turn, improves democracy. Assuming equality between participants as a prerequisite does not mean that participants in fact have equal opportunities for participation, and the result may just amplify the existing evils of group dynamics or oppressive power relations within societies (Sanders, 1997). There have also been critiques of unrealistic expectations regarding the preconditions and possibilities of discursive participation (Reichenbach, 2020) and rational argumentation (Huhtala & Holma, 2019), which means building overly demanding ideals of citizenship or discursive tasks that students cannot yet handle. The alleged moral superiority of dialogue also dims the fact that there are problematic sides to dialogical teaching styles and positive sides to monological ones and that there is wide variation inside both these categories. Furthermore, even if we close our eyes from this critique and assume that deliberative democracy can realize its own preconditions through a long process of education, it is noteworthy that the attitudes and capacities necessary for discussion cannot be created entirely by discussion; rather, they have to be fostered by other educational means. It is for these reasons that we are skeptical of the current beliefs in the educational potential of discussion in realizing the aims of deliberative democracy, although we do agree with the central aspects of the theoretical framework of deliberative democratic education and its normative aims. Nevertheless, we find the intrinsic value of discussion as such questionable, including its current status as a default option to treating controversial issues in education, despite remaining *one* important way of doing this.

In educational debates on controversial issues, there are three interrelated questions: *What* should be taught as controversial? *Why* should we teach controversial issues? *How* should they be taught? While the focus of this article is on the *how*, in order to answer it, we also present a short answer to the other two questions. Our take on the *what* question couples as a scientific–political double

criterion: 1) A question discussed in the political public sphere should be considered controversial in the classroom if no clear answer can be derived with reference to it on the basis of fundamental political values (for example, equal rights and freedoms codified in the constitution, personal and political autonomy, or value pluralism) and 2) a politically relevant issue should be considered controversial if there are different well-founded and empirically substantiated views on it and if it is considered genuinely controversial in the relevant scientific disciplines (for a more nuanced discussion of the criteria, see Drerup, 2021). These criteria serve the dual aim of *epistemically and politically* civilizing students, which is our answer to the *why* question. Epistemically, it helps students distinguish politico-normative issues from empirical ones and in judging what counts as justification; politically, it takes students to approach politically relevant issues by examining the core values of liberal democracy, such as pluralism and tolerance.

The answers to the *what* and *why* questions do not provide us clear-cut answers to the *how* question. Due to the complexity of educational settings and their interactions, it is still very much up to the contextual and situated knowledge of the teacher to decide the most effective and responsible way to approach controversial issues in education. Nevertheless, in debates over the *how* question, it is discussion of some kind that is taken to be the default approach: The question is not about "whether discussion itself is an appropriate educational method, but rather about *what type of discussion* is the most appropriate approach, and what subordinate actions are needed to support these discussions" (Original publication III, p. 220, emphasis in original). Once an issue is taken to be controversial, it is rather uncontroversial that discussion of some kind is the way to proceed. As we note, however, the "advocates of the paradigm of discussion emphasize that the proper preparation, the choice of topics and appropriate facilitation are crucial for the epistemic and also the political quality of discussions" (Original publication III, p. 221) as the point of discussion is not to simply articulate any opinion. Instead, we want evidence-based reasons built on a proper understanding of the subject at hand. This underlines our very point—rethinking the established assumption of discussion as the default option: "The educational and thus epistemic value of discussion essentially hinges on types of educational practices and arrangements, other than the discussion itself" (p. 221).

We then approach the *how* question using Dewey's theory of intelligence and his notion of versatile inquiries as an alternative framework for teaching controversial issues. This is done by first clarifying the notion of inquiry in general and then reflecting on practices of inquiry in education within this framework. We

begin with a familiarization of Dewey's pattern of inquiry and its five phases, as presented earlier in this dissertation, common to all kinds of inquiries (for more detail, see Sub-chapter 4.3). In order to efficiently proceed in our inquiries, Dewey insists on operating on the broadly and undogmatically understood methods common to all science: (self)criticality, self-correction, and the social (rather than individual) and cumulative formation of knowledge, "considering the realities in terms of cause and effect" and "the working causalities of nature" to produce knowledge to be utilized in "imaginative ventures of invention and construction" (Dewey, 1935, p. 52). Different types of problems demand different modes of inquiry for their resolution (Dewey, 1938, p. 82), and the methods of inquiry may be consciously progressed (Dewey, 1910, p. 300). In social matters, however, these principles are easily forgotten: It is assumed that "the correct solution is already given and that it only remains to find the facts that prove it" (Dewey, 1938, p. 490).

Dewey's (1916, pp. 282–283, 304) theory of intelligence suggests that individuals have grown into the meanings of their contexts and that their reactions have become somewhat intelligent, the social being their natural environment (see also Original publication I). We all conduct inquiries into everyday matters in a highly natural manner as the basic pattern of inquiry does not refer only to scientific inquiries but, rather, a continuum of intelligent problem-solving (Dewey, 1938, p. 106). For Dewey, training this natural capacity to inquire is the way to make most of the social intelligence of community members. This social intelligence is rich in contextualized understanding; it has the ability to pose problems and, thus, focus inquiries; it can provide a vast source of hypotheses, and most of all, it serves as the legitimate collective judge of the decisions made concerning itself. Nevertheless, its value is not comprised of any truth that it automatically possesses. A commitment to truth rather than justification among peers—the commitment to hypothetical realism—is of crucial importance in a Deweyan inquiry. We do not simply try to convince; we also try to find out what is true.

Inquiry is inseparably linked to a democratic way of life, and education is the way to achieve democratic ideals as we may collectively and gradually learn to inquire better and, thus, better solve the problems we face. As Ridley (2020) sums,

> Socialising formal practices of inquiry, developed to sophistication by academics and scientists, would help the public develop its collective intelligence, avoid co-optation by reactionary political parties and interests, free it from the manipulative consumption of the culture industry and, in time, reclaim democracy for the people. (p. 183)

The general benefits ("an informed generation of new citizens who can take part in democratic decision making," as Solomon (1992, p. 442) envisions) commonly associated with democratic ideals built on discussion remain an educational aim and possible outcome if we build our democratic ideals on inquiry. In Dewey's view, however, the intelligence of community members cannot be made use of simply by means of communication.

Discussion and inquiry are tightly bound as a community is crucial to successful inquiries. "Discussion will bring out intellectual differences and opposed points of view and interpretations, so as to help define the true nature of the problem" (Dewey, 1933, pp. 329–330). Nevertheless, defining and especially solving the problem require gathering relevant information of the actual situation using a variety of methods. Discussion is one of these methods, or it could be embedded in other methods, but it cannot be *the* method, as neither truth nor the best ways to act in a situation can be expected to be found only by embracing conversational ideals, skills, and a spirit of mutual respect.[30] Therefore, we argue that "If we take truth and facts as our aims, deliberation or discussion is just not the—only—way to go, and with insufficient inquiry the educational and political value of discussions aiming at a concord is questionable in many cases" (Original publication III, p. 225). To put it simply, in order to better reach the ideal of democracy as a collective inquiry, we need to train the habits of inquiry and a fallibilistic ethos of inquiry:

> We need to learn to gather information of the surrounding world and experiences of others in various ways – to listen more, to weigh evidence, to analyse the given situation thoroughly, and to withdraw to reflect and think – that is to inquire. (Original publication III, p. 225)

This turns our focus to inquiry as an educational ideal and its educational application in dealing with controversial issues.

Taking further the idea presented by Hand and Levinson (2012, pp. 615–617) that the open-endedness of truly controversial issues makes them meaningful for classroom discussion, we suggest that it is these unsettled issues for which the method of inquiry is an especially suitable approach and in which inquiry may be meaningfully learned. Open-endedness makes it possible to engage in an intelligent community of inquiry operating on the basis of its convictions, principles, habits,

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[30] Rydenfelt (2021, p. 242), for instance, rejects recent attempts at connecting the deliberative notion of democracy with a pragmatist notion (see, e.g., Habermas, 2003) by making an important distinction: "the pragmatist approach to democracy does not rest on the notion of rational consensus."

and perspectives and the intelligence of the community members as hypotheses to guide its inquiry. This is rather contrary to traditional educational inquiries that are watered down to performing pseudo-scientific tricks or memorizing the end products of scientific inquiries.[31] In addition, for Dewey (1932, p. 39), intelligence has an ethical component—that is, if action can be regarded as intelligent, it also has to be morally intelligent. Like all natural capacities, intelligence can be trained, which is exactly what happens when we are engaging in moral inquiries over controversial issues (as they are often sites of moral conflict, see the political criterion discussed earlier).

On a Deweyan take on inquiry, in order to overcome an indeterminate situation, we must rely on discourse through different kinds of symbol systems (Dewey, 1938, p. 109). According to Scheffler (1999, pp. 432–433), who builds strongly on Dewey, these are large, compatible, yet irreducible webs of symbols, none of which can be regarded as the ultimate set to grasp reality. This means that as educators, we need to guide students to the different sets of symbols that all aim to make sense of the same world; we must examine and exemplify how the different and diverse branches of science make sense of reality. Also, as Holma (2004, p. 430) notes, "In addition to the different sciences, for example, the realms of art, morality and religion all belong to education." Considering our rejection of discussion as a universal solution for strengthening democratic life, it is noteworthy that not all aspects of reality can be described by linguistic symbols:

> If all meanings could be adequately expressed by words, the arts of painting and music would not exist. There are values and meanings that can be expressed only by immediately visible and audible qualities, and to ask what they mean in the sense of something that can be put into words is to deny their distinctive existence. (Dewey, 1934, p. 81)

Inquiring can be learned as a habit of approaching the world intelligently. What we suggest is not a comprehensive reform of practices but a slight addition that makes a big difference: We are not suggesting that every lesson should be planned as a full course of inquiry; however, they can be planned while keeping in mind the broad concept of inquiry so that the lessons teach certain aspects of inquiries and scientific understanding, thus helping the student in making sense of the world in varying ways. Relevant and comprehensive information may be gathered in all

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[31] As we add, "the findings of science may well be taught in schools, as long as their social meanings are being explored as well, and as long as the process of these findings becoming a 'fact' is being made visible and thus exemplified" (Original publication III, p. 227).

traditional school subjects or regardless of these divisions. There are, of course, limits to what may be inquired in education, but the limits of inquiry are less narrow than those of discussion. Thus, non-controversial things can also be questioned and inquired, even if we may find some of these inquiries objectionable. For example, conducting inquiries into whether climate change is true or not can to a certain extent be allowed in education, trusting that if the inquiries are conducted and instructed thoroughly enough, the result will not be denialism: But too much discussion on such topics must be avoided during such inquiries in order not to give inappropriate space and attention to possible false and harmful views.

By engaging students in inquiries over controversial issues with no definitive answers, we also invite them to shared problem-solving, to utilizing and developing their intelligence, and to contributing their personal contextual knowledge and hypotheses. These inquiries may also serve as an introduction to a fallibilist approach to the world, which we consider a valuable addition to learning to live with disagreement and dissent (associated with discursive approaches)—learning to live with the fact that we may all be mistaken about something. As we note,

> The most important concrete demands that the Deweyan approach sets is that we start training teachers guided by a philosophical understanding of science and knowledge production, and an understanding of diverse ways to inquire into a plurality of matters and the plurality of views regarding these matters. (Original publication III, p. 232)

The discussions that we have (and certainly want to have) in the classrooms will be very different depending on whether the educator views the process as discussion or inquiry. Our approach shares the ends and values that discussion as an approach to controversial issues in education strives for, "but the means have to be revised, rescaled and, recast in light of their consequences in concrete educational situations" (Original publication III, p. 229).

6 Conclusions: Contextual, social, and educable intelligence

The observations of the three original publications present multiple angles to Dewey's theory of intelligence, offering a reconstruction that demonstrates how this implicit theory resonates in educational settings. In the original publications, it has been argued that intelligence is fundamentally contextual, that it manifests and cumulates socially in our collective actions and constructions, and that the multiple components that make our actions more likely intelligent, such as "assessing and evaluating the consequences of actions, a willingness to learn and the courage to review and revise one's actions" (Dewey, 1920, p. 135), can be learned, which makes intelligence educable. In Dewey's (1935) theory, intelligence is the mediator between what is old and known and the inevitable new that is yet to be known—it seeks to "effect a working connection between old habits, customs, institutions, beliefs, and new conditions" (p. 37). The theory presents insights that are useful in making education more intelligent and in training the intelligence of those who are being educated. By adding to the existing meanings associated with intelligence, it strives to undo some of the harms that the blind spots concerning intelligence have caused to our thinking, habits, and practices in education.[32]

In Dewey's (1927, p. 366, emphasis in original) view, "*effective* intelligence is not an original, innate endowment. No matter what are the differences in native intelligence (allowing for the moment that intelligence can be native), the actuality of mind is dependent upon the education which social conditions effect." In short, intelligence is educable. I have argued, following Dewey's thought, that people's everyday intelligence should not be neglected but, rather, recognized and taken

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[32] The tempting paths to be taken for future research are numerous. For instance, the role of creativity cannot be overemphasized in Dewey's theory of intelligence, yet in this thesis, it has received little attention. Another possible line of further research is a conceptual one. This thesis does present three critiques of intelligence and, thus, broadens our understanding of the concept. In terms of concept development, it does "differentiate the constituents of some abstract concept and thus provide a fruitful categorization of a related set of phenomena" (Coombs & Daniels, 1991, p. 33). However, it fails in terms of giving it a name distinct from intelligence. Discussed under such a broad denominator, Dewey's theory is prone to many of the misconceptions that follow from the mainstream individualist conceptions of intelligence. In the initial stages of this inquiry, I grew interested in Dewey's notion of social intelligence: This term is, however, problematic in describing Dewey's theory of intelligence for two reasons. First, it might suggest that intelligence is completely social and non-individual, although for Dewey it is possible to distinguish individual features of intelligence. Second, the term social intelligence has been popularized through a very different usage in popular psychology, denoting the ability and skills to do well in social situations and encounters. Despite this conceptual limitation, I believe that adding to the existing meanings associated with intelligence is an important task.

seriously. To put it bluntly, education that aims to make someone more intelligent should not operate on the idea of trying to deliver intelligence to them (or forcing assumed stupidity out of them); instead, it ought to observe and train the educable intelligence that is already manifest in their interactions with the world. However, the neglected, contextualized everyday intelligence is not a solution to all of our problems as such. It is through education that we can give intelligence the opportunity to engage with varying practices of inquiry that have been found to be effective in intelligent problem-solving, thus "socialising the practices of inquiry" developed by science, to use Ridley's (2020, p. 183) apt depiction. Making sense of the world in multiple ways can be effectively learned in education alongside habits and dispositions that are needed for making the most of the experience-based intelligence provided by those who are being educated. The intelligence of the public is indeed what Dewey's philosophy builds on. However, this intelligence must be trained by utilizing practices of inquiry in order to make better decisions concerning our common affairs and build on a better and broader utilization of our everyday experience.

In order to foster intelligence on a large scale, the most important (or at least the most politically urgent) challenge that this research poses for education is providing students with a robust theory of knowledge and fostering their aspiration to be informed of the world in multiple and diverse ways. This implies training them in the capability to cope with the fact that we all may be mistaken and that better knowledge can and should be sought. Nevertheless, educators need to be careful about two likely and risky pitfalls. First, anything-goes relativism cannot be accepted as an outcome of this fallibilist approach: "That's just how I feel" or "that's how it is always done" are indeed justifications for things, albeit very poor ones. Educators must demand better ones and teach students to demand better ones alike. Second, learning the critical stance that we all may be mistaken may lead to cognitive dodges that need to be avoided. As we note with Johannes Drerup,

> Scientific knowledge for instance must of course be thought of critically, but even more it needs to be taught that we also have good reasons to believe it to be true, even more than to doubt it, exactly *because* it is openly fallible. The idea of falsifiability, if learned shallowly, will lead to terrible results, if the students' quest for certainty leads them to rely on 'infallible' sources. (Original publication III, p. 231, emphasis in original)

If (or as) such relativist and foundationalist approaches to knowledge are applied to democratic decision-making, the consequences may be devastating, such as self-

centered value relativism and post-truth politics regarding common matters. However, as we optimistically note in the same article, "Children are naturally provided with a required capability to wonder and inquire—what is needed then is a teacher that may help beyond this good start" (Original publication III, p. 232). Thus, a robust theory of knowledge appears to be the fundamental element that also needs to be strengthened in teacher training in order to provide teachers with the theoretical basis needed in this task.

Dewey's theory of intelligence suggests that it is our social web of interactions that shapes who we are capable of becoming intellectually. In order to better understand intelligence and make it flourish, we may need a shift in focus from individual intelligence as a possession, "personal endowment or personal attainment" (Dewey, 1927, p. 367), to the structures and interactions that enable individual engagement in intelligent action as well as to the harmful ones that prevent it. Education cannot be intelligent unless it is designed with attention to the social practices that enable it. This dissertation suggests that if one wishes to take a well-functioning educational solution to another context, it will be beneficial to not regard the solution as a self-standing object most likely to succeed in any context but, rather, to examine the interactions between the solution and its context that make it a well-functioning one. In concrete terms, well-functioning solutions— be it preventing bullying in schools (Väisänen & Lanas 2021), education export (Wiborg 2010), or projects aimed at strengthening civil society engagement (Gaventa, 2004; Pettit, 2016)—are not easily translatable from one context to another and might end up with seriously distorted outcomes unless we pay attention to the contexts and interactions regarding the original solutions and the new contexts to which they are taken.

The social practices that enable or downplay intelligent participation must also be thoroughly examined in education and not only in the design and planning phase. Such an examination should include the societal power relations that often invisibly or unobtrusively shape the social sphere and, thus, the individuals forming it. As our problems are often collective, it seems yet another task for education to also provide such insights into the problems we now face that would highlight their social nature and help surpass a narrow individual perspective. Education must consciously resist the ossified bias of the individual/social dichotomy, the "idea of a natural individual in his isolation possessed of full-fledged wants, of energies to be expended according to his own volition, and of a ready-made faculty of foresight and prudent calculation" (Dewey, 1927, p. 299).

The contextuality of intelligence highlighted in this dissertation does not rule out making generalizations that are wider than a person's individual and, indeed, very contextual point of view. Theories (both scientific and everyday theories-in-use) are indispensable and desirable for intelligent action, though only as long as they are not hypostatized as truth but taken as hypotheses. Treating ends and values equally as previously tested intelligent contextual solutions to problems of morals subjects them to revision but does not negate them. Rather, Dewey's theory suggests giving up dogmas and embracing a fallibilistic stance toward knowledge in order to make our actions based on this knowledge intelligent—to maintain the elasticity of thought needed to form the connection between old and new.

The views presented in the original publications stress the need to provide education that is conscious of its contexts and aware of the risks of (rather inevitable) decontextualization of our conceptions. As noted in the Original publication II, in a Deweyan sense, decontextualization is a neutral term: It is positive to the extent that it allows us to act intelligently in varying contexts, but it always involves a negative possibility of excessive generalization or false assumptions based on previous experiences in different contexts. Considering this, we must bear in mind the temporal nature of what may be regarded as intelligent as the world and our knowledge of it are prone to change. It is obvious that this dissertation will not provide detailed solutions to any single concrete classroom problem, but it does provide a useful theoretical base to guide educational actions that take place in constant (and often very hectic) flux. It suggests that in order for us to make intelligent decisions, our conceptions need to be recontextualized over time. Dewey's philosophy challenges us to continuously and recurringly revise, update, and contextualize education. Thus, we must be aware of the fact that the contexts of our educational actions are changing and recurringly remind ourselves of the risks related to neglect of context caused by our handy generalizations and theories-in-use.

The views of intelligence and education presented in this dissertation also suggest that schools should be provided with sufficient autonomy to enable them to perform their critical role of societal renewal. However, as Holma (2018, p. 410) notes, the autonomous school is not an isolated one. An autonomous school is well aware of its contexts (and helps those who are being educated in being aware of their contexts), but it is not dictated by them, whether they are economic, political, religious, etc. Granting education such autonomy would gradually enable the amelioration of societies through critical scrutiny performed by those who learned it in education.

We cannot tell what the contexts of the future will be, and thus, we cannot provide solutions that would automatically be intelligent in altered conditions. Nevertheless, it is possible to train people to examine the current situation and what actions are possible in it in order to provide a concrete example of how to intelligently examine a situation, including once it has changed. If we approve Dewey's view of intelligence, we must by all means try to provide both those who are being educated and those who are educating with wide-ranging ways of understanding and exploring the contexts that affect their actions. This will give them the possibility to change and improve society and to take its development positively and collectively into their own hands. This will, of course, require that it is made explicit in education that things will change and can be changed intentionally and intelligently for the better.

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Appendix

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The contexts of intelligent action: A Deweyan approach to decontextualization in education

Abstract

I approach decontextualization in education through John Dewey's theory of intelligence. The article distinguishes three spheres of problems following from decontextualization in education. The first—social decontextualization—is a result of isolating individuals from their social contexts and interdependences. The second sphere—the decontextualization of knowledge—is a result of understanding intelligence as learning and adopting context-free knowledge and habits. The problems of this sphere are connected to harmful societal power structures. The third sphere—the societal decontextualization of education— follows from the problematic relation of education with other areas of society. Education is seen as either isolated from the rest of society, or its methods, solutions and ideals are imported uncritically from other contexts. I claim that society as it is defines the contexts and premises of education, but not the solutions nor fixed ideals of intelligent education.

Keywords: decontextualization, education and society, intelligence, John Dewey, philosophy of education

Introduction: Intelligent action and the diversity of decontextualization

I approach the questions of decontextualization in education through John Dewey's theory of intelligent action.[33] In Dewey's definition, "[t]he office of intelligence in every problem that either a person or a community meets is to effect a working connection between old habits, customs, institutions, beliefs, and new conditions" (Dewey, 1935, p. 37). In his philosophy intelligent action always requires

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[33] Also social intelligence (Dewey, 1935; Kauppi, Holma & Kontinen, 2020; Narayan, 2016), or in Ridley's (2020) words collective intelligence.

examining the situation, defining the problem, outlining the resources and imaginatively considering different possible actions, but also weighing the solutions that have worked in previous contexts. No action is intelligent in itself: Intelligent action means reacting and preparing to the surrounding reality based on preceding experience and its status as intelligent action is defined by the situation and those in it (and affected by it). Intelligence is to be understood as constant and continuous interaction with the environment, rather than as a permanent individual property, and thus its maintenance requires assessing and evaluating the consequences of actions, a willingness to learn and the courage to review and revise one's actions (Dewey, 1920, p. 135). As Bernstein (2010, p. 85) notes, for Dewey intelligence is not a separate faculty but rather a set of useful habits, customs and attitudes that include attentiveness to details, imagination, and passionate commitment, all manifesting in the practices of everyday life. Neither can intelligence be reduced to simple rationality, as through human experience it is diffused with desires, feelings and passions that provide information of the surrounding world similarly to reason, but in differing ways (Bernstein, 2006, p. 172).

Building on Dewey's theory of intelligent action it is possible to distinguish three essential spheres of problems of decontextualization in education. These spheres are interrelated but also differ to the extent that it is useful to observe them as distinct spheres. The first of them—*social decontextualization*—is related to the social nature of intelligent action and it is connected to the criticism of the individualization of education. The problems of this sphere emerge as individuals are separated from their social contexts and the social dimension is lost in education. The second tangle of problems—*the decontextualization of knowledge*—originates from envisioning intelligence as learning information or habits that are seemingly independent of the concrete world. This sphere of problems leads to constructing unmeaningful content in education. Understanding the decontextualization of knowledge is also important for us to be able to dissolve harmful power relations through education. The third sphere of problems—*the societal decontextualization of education*—originates from the relationship of education and other areas of society not building in a sane way. The ideals, practices, problems, and solutions of education are imported uncritically from other contexts, or alternatively the school is presented as isolated from the real world and its problems. This leaves the educator and those being educated no other role than that of a spectator in the transformation of the society.

Dewey's theory of intelligent action unwraps the diversity of decontextualization in education and opens a possibility to structure the problems related to it. Even though Dewey is an undeniable classic,[34] it has been claimed for example by Labaree (2010) and Lagemann (2000, p. xi) that soon after his death he became marginalized in educational sciences. His philosophy thus represents an alternative to many predominant discourses, such as the simplistic demand of the measurability and quantifiability of education, or the individual focus and instrumental rationality of Tyler's rationale (see e.g., Saari & Harni, 2016). As Hannu Simola (2015, p. 36) notes regarding the educational reforms of the latter half of the 20th century, Dewey probably did not even realize how ahead of his time he was when he criticized educational ideals breaking away from educational realities.

In the next chapter I examine the concept of decontextualization and reconstruct a Deweyan take on it with my focus on the situationality of intelligent action. In the chapters that follow I approach the three abovementioned spheres of problems: social decontextualization, the decontextualization of knowledge and the societal decontextualization of education. My take on the issue contains three critiques, but also ideas for improving our educational actions. At the same time, it structures the plurality of decontextualization in education.

The contextuality of intelligent action

Using the concept of decontextualization Hannu Simola (1998, 2015) and Antti Saari indicate multiple problematic phenomena within education. The shared feature of these phenomena is that a prevalent discourse or some other practice neglects something essential in its surroundings. In other words, action is separated from some of its relevant contexts. Some perspective, possibly a very important one such as the individual-psychological basis of learning, gains a dominant position and hides some other perspective, such as the societal mass character of education. Important information may also be lost in the abstractions necessary for knowledge production, for example when relying mostly or completely on a measurable understanding of the object observed (Porter & Ross, 2003; Smeyers

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[34] In Finland for example Reijo Miettinen (2006), Ari Sutinen (2008), Kai Alhanen (2013), and Katariina Holma and Tiina Kontinen (2020) have broadened our views of Dewey's educational thinking and its societal sides, taking other perspectives as their starting points. Internationally for example Jürgen Habermas (1996, 2003), Axel Honneth (1998) and Elizabeth Anderson (2006) have explored kindred themes.

& Depaepe, 2010). Decontextualization prevents seeing the overall picture or distorts that picture.

Additionally, other meanings have been given to decontextualization. According to Boris Meshcheryakov (2007, p. 166), the concept has a special meaning for cultural-historical psychology. [35] In this research tradition, decontextualization denotes a process of knowledge production, in which a single experience is taken out of its contexts in order to construct ways of acting in other situations. The knowledge gained in a concrete situation may for instance be abstracted verbally in order to be utilized in another context. Our observations may be formed into principles of thinking, habits, and further into scientific theories. The field of educational psychology refers to the similar phenomenon more generally as *transfer*. These two interpretations of decontextualization that at first sight seem different are however essentially connected. This connection can be seen as a central element to the work of pragmatist philosopher John Dewey. From a Deweyan point of view [36] the different meanings presented above are actually different sides of the same coin. Knowledge production that detaches from the original context is in his philosophy the necessary starting point if we wish to act intelligently without having to conceive our surrounding environment from scratch time after time. This however almost inevitably leads to problems caused by abstracting and universalizing. Such problems are indicated in the critiques of decontextualization by Simola and Saari. Roger Säljö (2001, p. 39) points out aptly, based on Dewey, that "decontextualizing learning, which leads to what we call school and education, is both the prerequisite for learning in a complicated society and the change that creates many of the problems of learning that we may nowadays observe in school" (translation by V.-M. Kauppi). The decontextualization of cultural-historical psychology could therefore be attributed as positive decontextualization, while in Simola and Saari's use it is negative decontextualization. Dewey's focus is on the tension formed by the two. Knowledge is always formed in some context(s) and it is utilized in some context(s). Abstractions derived from concrete experience are mutually context-dependent when they are applied in another context—and it is exactly this application that is

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[35] For the similarities and some differences between Dewey and Lev Vygotsky who was essential to cultural-historical psychology see, e.g., Glassman (2001), Miettinen (2006), O'Brien (2002), and Prawat (2002).

[36] Dewey does not use the concept of decontextualization, but the problems connected to it are central to his work through such concepts as situation and environment. Additionally, the concept of context is present in his work, see, e.g., Dewey (1931, p. 5): "The most pervasive fallacy of philosophic thinking goes back to neglect of context."

the office of intelligence (Dewey 1935, p. 37). To put it in another way, we are balancing between indispensable and useful presumptions and hypotheses, and misleading generalizations and harmful habits. In their well-intentioned quest for universality and generality our habits and theories risk dispelling the temporal, spatial and personally experienced original problems for which they were effectual solutions.

In his *Lectures in Social and Political Philosophy* from 1919 (2015), that were only recently published, Dewey compares the quest for context-free intelligent action to the pursuit of building a railroad without finding out the locations of cities, natural environments or the social or economic reasons for which the railroad is being built. It is obvious that Dewey does not deny the possibility of writing a book called *General Principles and Practices for Building a Railroad*. The general observations made in such a book should however always be applied according to the specific context, and this would certainly be stated in the book. It would most likely not portray itself as a universal theory of railroad building no matter what context. Dewey stated the problem of universal solutions also in other ways: "The futility of attempting to solve a problem whose conditions have not been determined is taken for granted." (Dewey, 1938, p. 488). Intelligent action requires a sufficient understanding of the context of action, and vice versa, fully decontextualized action is rarely intelligent. Neither is decontextualized education intelligent education, but rather it is arbitrary and even in the best case directed by traditions and habits and its outcomes are unpredictable. Traditions and habits have of course been formed as intelligent action has sought form but the intelligence in them may become outdated as situations change, and our perspectives become wider. This may result for example in a school system that functions excellently according to various indicators but simultaneously neglects questions that are imperative for those being educated—such as the question of an ecological catastrophe breathing down our necks (Värri, 2018). I will next structure in more detail the three different spheres of problems with decontextualization as their common denominator.

Social decontextualization

I have named the first sphere of problems in my approach as social decontextualization. At its center lies the dominance of the individual vantage point, which in Finland has been criticized by the already mentioned Hannu Simola (2015, p. 22–25), for example. In Dewey's view we have widely accepted a misconception

of individualism, one that presents an individual as the sole starting point of action and as something that can be meaningfully observed in isolation from its environment (Dewey, 1920, pp. 107–108; 1927, p. 249; 1930, p. 78). Thinking in terms of positive decontextualization, the individual perspective that philosophical liberalism especially has highlighted has undoubtedly been necessary and useful. During its rise it was indeed revolutionary as it moved the focus to the individuals under rule and dismantled the coercion practiced by rulers and the church. However, Dewey notes, it is not possible to change the scale and scope of our observations so that we would find any unit so big or small that it would be meaningfully what it is independent of its surroundings (Dewey, 1927, pp. 351–352). In reality, individuals are formed and gain consciousness as they act in relation with the surrounding social reality, and they grow into the collective meanings that existed before the individual and will continue to exist (although partially changed) even after the individual (Dewey, 1916, pp. 282–283, 304; 1938, p. 481). All the actions of an individual carry within them the influence of their communities, just as it is written into the language that they speak (Dewey, 1922, p. 218). Individual variations in thinking offer communities the imaginative power of change and possibilities to do things differently, but for these variations to be intelligent they need to operate on categories and conceptions that have been adopted from outside the individual (Dewey, 1916, p. 306; 1927, p. 268; 1938, p. 482). Intelligence, however, is seen as an individual possession in our everyday thinking (Dewey, 1927, p. 367).

What follows from the notion of socially decontextualized individuals separated from their environment is that their actions are outlined in a distorted way societally, economically, and educationally. In such a view the community and the society appear as antitheses of an individual, and the social habits and practices that shape the individual as an active part of a community are dimmed from our observations. (Dewey, 1920, pp. 107–108, 194; 1927, p. 351). From an individually focused point of view, the main motives for an individual appear to be mainly personal economic or other kind of profit (Dewey, 1930, p. 78). There is nothing wrong with profit, but if problems are reasoned on the level of personal profit—and if people are being taught to reason them this way—an artificial gap is being created between the individual and the community. Such an outlook prevents both communities and individuals from acting intelligently as a whole—and in the long run their actions will also cease to be profitable.

The essential thing here is that the problems that humankind faces are not so much problems caused by scarce or tough nature, but the cause lies with humans

themselves, mostly indirectly and above all, collectively—take for instance climate change or global poverty. How these problems are to be solved is also up to humankind and its communities, within our own institutions and organizations (Dewey, 1935, pp. 43–44). The social decontextualization of education however leads to problems of joint action and cooperation. The individual point of view, taken to the extremes, disconnects education and other intelligent action from their social contexts. It prevents us from rationalizing our actions collectively as the problems would require because individuals only react to the fragments of problems that primarily and directly are their concern. From such a theoretical premise it is difficult to develop large-scale and long-term intelligent action. In the formation of intelligent social action, it is the role of the school institution to help individuals surpass the individual point of view and to see oneself in a larger social context and as a part of the wellbeing of one's own society (Dewey, 1897, p. 84). Intelligent action requires understanding the contexts of individuals, most of all understanding their socially formed communities. The school cannot solve all the problems in society, but it can raise to observe, diagnose, and solve shared problems. Within current educational practices it can be naturally inquired, for example, how our problems appear when observed from other angles or from the perspective of someone else's experience; we can inquire into the backgrounds of the problem and its relation to other phenomena; we can inquire why it is a shared problem rather than individual; we may consider possible solutions to the problem; and consider the consequences of these possible solutions for those affected.

Dewey's thoughts on intelligent action also challenge the prevalent standpoint that neglects contexts formed by shared and social intelligent action (such as schools, science, material and immaterial technology) which enable individual top achievements of intelligence. Education must make visible such socially formed contexts that enable intelligent action but are difficult to detect. The reality of the mind is dependent on its education, which further on is dependent on its social contexts and the objects of its reality (Dewey, 1927, pp. 366–367). It is the surrounding framework that enables individual and collective intelligence, or on the other hand restricts it. Using an example by Dewey: The constructors and crew of a vessel that roams the oceans are not a single bit more intelligent by their native capacities than their ancestors that moved on frail boats, the difference is in the socially cumulated advancements of their surrounding communities (Dewey, 1935, p. 48). No one's personal intelligence will get them very far on its own, but personal capacities and knowledge gained through experience can be utilized mostly in communities. An ocean liner's captain is in a hopeless situation if left to sail alone

without a crew, no matter how much of an experienced and intelligent seafarer he happens to be. The perspective of personal achievements however gets more attention than complicated socially formed entireties. The societal selecting function of school takes care of this for its part in education. The universities have also witnessed a trend of talking about top researchers, top everything and such neologisms as *topness*, in the words of Filander, Korhonen and Siivonen (2019, p. 18) "huiputuksen moraalijärjestys" [the moral order of trickery],[37] which hides the social building of intelligence. In Dewey's view (1922, p. 216) science is also about cultural progress, not individual intelligence, whether it be that there may be individual differences in intelligence. In addition to trying to develop more intelligent individuals we should develop communities so that everyone's intelligence gets to operate more effectually without anyone's personal intelligence actually increasing (Dewey, 1927, pp. 366–367; Kauppi et al., 2020, p. 47). The notion of intelligence as an individual possession that disconnects it from its social contexts however makes such progress difficult.

It is easy to imagine long-term societal impacts for education observing the web of reciprocal interdependencies and possibilities. Optimistically Dewey sees this as a basis for the birth of political actors capable of making their societies better for all (Dewey, 1935, pp. 48–49). Additionally, it strengthens mutual solidarity (Dewey, 1927, p. 329). It is the perspective of interdependencies that creates the basis for cooperation, communication, and interaction. For its own part Dewey's educational theory has possibly brought themes of communality to current curricula and educational talk, at least superficially. Cooperation and communication should not however be just rhetoric, without dealing with and solving problems truly relevant to the community and its members. If cooperation and communication skills are taught with no critical analysis of the contexts of interdependencies and power relations, it is resilience that is taught. We then only teach how to adapt oneself to existing hierarchies, not how to change them or how to improve the surrounding reality. I will return to this theme within the next sphere of problems.

Decontextualization of knowledge

The second sphere of problems in my take on the decontextualization of education originates from the aspiration to increase the intelligence of those being educated,

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[37] This is a pun that does not translate. It plays with the similarity or the Finnish words *huippu* (top, peak, apex) and *huiputus* (trickery, shenanigans). *Huiputuksen moraalijärjestys* thus translates clumsily as the moral order of making the tops / the moral order of trickery.

which then shrinks to teaching out-of-context subject matter and habits that are thought of as intelligent. According to Dewey everyone in a society wins if intelligent social action (such as education) is resourced: Communities that do this appear to benefit from the growth of their constituents and their ability to take part in intelligent cooperation (Kauppi et al., 2020, pp. 49–51). However, education cannot be a unidirectional process in which intelligent practices are being served to those that are being educated, even though the insistence on the availability of knowledge and institutions that produce and distribute it are a necessary part of Dewey's thought.

In Dewey's view educational practices and theories often take a skewed starting point by assuming that intelligence is somehow independently embedded in the contents taught in schools, and that the schools, teachers, and education planners already possess all knowledge needed. The contents and the intelligence embedded just need to be delivered to the students. This train of thought is parallel to the one that Simola (1998, p. 349) points out, of trying to create context-free and school-free pedagogy to suit any situation. Dewey in turn criticizes a kind of context free worldless knowledge—in other words the idea that there exists knowledge relevant in all situations, and the digesting of which automatically leads to intelligent action (or on the other hand the idea that educational actions could be planned based on some universally relevant data). On the contrary, knowledge is always contextual, and no matter how useful it was in one situation, its application in another context requires adapting it, that is to say, intelligence.

The idea of context-free "pure" knowledge leads for its part to existing historically inherited cultural power relations determining what is appreciated and considered as intelligent (instead of problems that truly need to be solved determining this). Decontextualization of knowledge elevates some knowledge as absolute and simultaneously degrades some knowledge and the status of intelligent action based on it. However, people are capable of intelligently responding to the problems of their own environment, even if these problems do not always appear as problems traditionally considered as intellectual ones (Dewey, 1916, p. 304). For example, such undeniable intelligence that is required to drive a lorry in a metropolis or to casually nurture multiple children is left unappreciated and also unutilized more broadly. The intelligence that is bound to contexts through individuals is left waiting for systematic inclusion and utilization—in means that are reminiscent of those that have brought the potential of the physical environment for the use of humankind, that is, experimental and collective intelligent action (Dewey, 1935, p. 64). From a Deweyan perspective, schools, other educational

institutions, and entire societies lose an enormous amount of intelligent potential when they do not recognize and utilize the intelligence that their members have gained through experience and that has cumulated to them socially, and instead try to offer them seemingly universal knowledge for any given situation. This leads to theory and practice separating from one another and appearing as antithetical.

If education holds on to a traditional idea of decontextualized knowledge and purely individual intelligence it dims the power relations that in part give some action an intelligent status. In so doing it promotes such societal development in which a minority of seemingly intelligent people rule, and the rest are left under their rule with no possibility of intelligent participation. This happens regardless of whether or not the actions of the ruling class are in the long run intelligent to any extent. This directs people on the basis of their socio-economic background to tasks that serve the interests of the economy short-sightedly, for example, and not their own objectives. Their intelligent potential is then also restricted from actualizing on a full scale for the benefit of their communities. (Dewey, 1916, pp. 268–269, 325–329; 1930, p. 104). This is for the most part unbearable from the point of view of an individual, but before long it is unbearable also for the whole society. This makes it one societal task for education to bring light to and inquire into the interdependencies and power relations in society, in order to educate people as responsible carriers of their own ends and objectives. (Dewey, 1909, pp. 270–271; 1916, pp. 225–226, 324, 328–329). Without the critical examination of the societal power relations connected to knowledge and intelligent action, education has to rely on mere given traditions and the structures that come with them, many of which are harmful. In so doing education fails to offer possibilities for acting alternatively, better, and intelligently, and it accommodates those educated to the prevailing conditions.

As concrete approaches to unravelling the problems of the sphere of decontextualized knowledge Dewey suggests bringing historical-societal perspectives and scientific thinking to schools more extensively (Dewey, 1899, pp. 13–15;1916, pp. 225–229; 1935, p. 52). Here science is to be understood in a broad sense, not for instance as the methods of natural science. Both approaches offer instruments and exercise for intelligent thinking. Historical understanding presents perspectives to how different communities have solved their problems in different situations. Ready-made solutions cannot be drawn from history, and no context-free knowledge is to be found there. It does however help in observing previous problems, their backgrounds, frames and solutions, and the moral consequences of those solutions. Equally, the accomplishments of science are always creative

solutions to contextual problems, from where they have been taken and used for other contexts. This is also how the accomplishments should be understood, and taught, with their backgrounds. The general principles and logic of science, such as (self)criticality, self-correction, social rather than individual knowledge production, the cumulation of knowledge, assessing cause and effect and the imaginative utilization of knowledge thus gained (Dewey, 1935, p. 52) are more important for learning intelligent action than the achievements of science as subject matter are. This subject matter is of course necessary for intelligent action, but it should not be given absolute value. Features of reflection and inquiry-based learning can indeed be observed on a textual level in recent curricula, but inquiries into societal power relations not so much.

Societal decontextualization of education

The third sphere of problems in my analysis follows from education having an ambiguous relationship with the rest of the society—when we are developing the school, in concrete everyday practices, and in public discussions and debates of educational sciences. To understand education and to implement it intelligently requires a comprehensive view of education in relation to other parts of society. Peculiarly the demand to look at education as a part of society has subordinated education to other areas of society: Especially it has been interpreted as the implementer of the interests of economics and industry. The questions of education have thus been viewed through the ethics of economics, instead of ethics of education (Alasuutari & Lampinen, 2006; Kiilakoski & Oravakangas, 2010; Masschelein & Simons, 2013; Miettinen, 1990; Värri, 2006). The instrumental rationalization of education threatens education's autonomy, which has widespread negative consequences.

Education creates and modifies our fundamental intellectual and emotional dispositions towards nature and other human beings. Therefore, education has a special status in Dewey's social philosophy, and philosophy could in his view be called "the general theory of education" (Dewey, 1916, p. 339). Already in his early work *The School and Society* he suggests that we take our focus away from the school itself and rather look at it as a part of the larger whole of social life (1899, p. 44). But this is not a unidirectional process in which the norms and practices of society are brought to school as such, although such interpretations are not unheard of (see e.g., Kiilakoski & Oravakangas, 2010, p. 19). *The School and Society* focuses for the most part on its contemporary concrete educational questions, but

at the beginning of the work Dewey summarizes his view of the relation of education and society: "All that society has accomplished for itself is put, through the agency of the school, at the disposal of its future members. All its better thoughts of itself it hopes to realize through the new possibilities thus opened to its future self." (Dewey, 1899, p. 6). If children and young people are provided with sufficient physical and social resources to release their intelligent potential through experimental action, they develop into individuals capable of developing their future communities so that they are able to respond to the challenges of the future that for the moment are beyond our scope (Dewey, 1927, p. 360–361). The emphasis is thus on the forthcoming unknown, for which we cannot have completely ready solutions to offer for the children and the young. Impossible utopias should not be sought after, but neither should we fix our goals by the standards that at the very moment seem to be the best ones. Rather it is up to education to offer possible instruments for dealing with yet unknown problems.

Basing his thoughts on Dewey, Israel Scheffler further develops the notion of education's special societal autonomy. His interpretation has similarities with for instance the German tradition of Bildung, according to which the ideals of education cannot be achieved if the school system is steered by "erratic everyday politics" (Saari, Salmela & Vilkkilä, 2017, p. 64, translation by V.-M. Kauppi). As Holma (2018, p. 410) comments on Scheffler's Dewey-interpretation, being autonomous is by no means synonymous with being isolated, but instead education's relationship with other areas of the society is reciprocal and creative. Rather the suggested autonomy is such that education is not an instrument to reach short-term societal ends; that the curriculum does not change every time the government changes; or that the economic life does not one-sidedly set the aims of education based on its own needs of the moment. Scheffler's school ideal is however everything but apolitical.

Scheffler embraces Dewey's view that predetermined ends, goals and aims that cannot be altered prevent us from obtaining the best possible ends, as our imagination is not in the present capable of conceiving all the existing possibilities, nor the ones yet unactualized (Dewey, 1917, p. 20; 1920, pp. 134–135; 1927, p. 366; see also Rorty, 1999, p. 120). According to Scheffler, the aims of education need to be open and subject to critical scrutiny. A society that provides such education must also be willing to accept the habits of experimental and inquiring action and the attitude of criticality that are gained in education, to other areas of society as well. Such a society seems then even subordinate to education, although education serves the society's own aims. (Holma, 2018; Scheffler, 1973, pp. 134–

135). If the aims of education are fixed, they prevent the critical experimentation that the school is supposed to foster—and therefore viewing education as a means to achieving predetermined societal ends endangers a free and rational society, regardless of how valuable these ends are thought to be (Scheffler, 1973, p. 134).

The risk of decontextualization in the predetermined ends and aims of education is twofold. On the one hand, aims can become ends as such, taken apart from the reality that once made them worth striving for. Chasing such ends will not necessarily in the end help in conceiving the best possible solutions. The aims of education are always attached to some time-bound human contexts that inevitably will change at least partially. If these aims are fixed, educational ideals are indeed attached to some contexts, but possibly such contexts that are no longer relevant. On the other hand, another danger with predetermined ends and aims is that they hamper open discussion and inquiry regarding ideologies and values (Holma, 2018; Scheffler, 1973, pp. 27–29). For example, political ideologies are somewhat indispensable to our social life, and they form a context of their own, and the same goes with values behind these ideologies. Inquiring into them, understanding them, critically reflecting on them and further developing them are central contents to education. Such actions are however made difficult if the ideals and values are so fixed that they cannot be openly discussed and critically examined.

Open ends nevertheless do not indicate at aimlessness of education or value relativism. Values and ideals are necessities of action, and they are based on being observed as well functioning solutions in some situation, from where they have been generalized to broader contexts. Taking values and ideals from one context to another always requires reobserving and reassessing them and their consequences. The values and ideals of education need to be openly discussed, in interplay with the values and ideals of other areas of society, and they must always be open for challenging and questioning. Challenging and questioning does not denote rejecting or simple criticism, but instead reviewing whether the values need to be fixed in relation to the surrounding reality. In other words, we need to build "a working connection between old habits, customs, institutions, beliefs, and new conditions", to return to Dewey's definition of intelligence (1935, p. 37) already cited earlier.

It is the responsibility of the school to provide a space with enough room for moral reflection relevant to society and those being educated (Dewey, 1909, p. 272; see also Saari, 2020). In addition, people need to have sufficient access to factual knowledge and a true possibility to also participate in the shared reality, for them to be true moral actors (Dewey, 1935, p. 48–49). When education happens in

interactions with questions of the real world, the intelligible consequences of actions can be observed in real-life situations, making the moral side of the things that are learned concrete (Dewey, 1909, p. 285). The essential thing to do is to merge societal and moral reflection with factual knowledge and not dissociate them as separate realms of thinking. If such a habit is learned in education, the rearrangement of harmful societal power relations in the present and in the future (such as solving problems related to socio-economic inequality) will most likely be premeditated and fact-based, even if it is in strong discord with some existing practices of society.

Although educational institutions cannot import their solutions from other areas of society as such, they do provide education with problems to be contextualized and elucidated, and the possible solutions of which are to be observed in education. The other areas of society also provide education with initial ideals that education may strive for. Such education might require adopting a fallibilistic principle, in other words accepting that we may well be mistaken, but nevertheless trying to act based on our best understanding while trying to improve this understanding (see e.g., Holma, 2012). Thus, contemporary society provides education with a context, but it does not enter education as such. It can and it must be the working material of education on its way to another society that consciously improves itself. It is possible to train future competences in school, but we can never tell certainly in the present what these competences are. Knowing the contexts of action will however always be necessary. In the unknown future things will also have to be weighed based on the values and understanding of the present of that moment. Thus, education prepares for the future by inquiring into the present and the possibilities it offers, so that such actions could be taken also in the changed situations of the future.

Recontextualizing education

Three different spheres of problems take shape when the decontextualization of education is observed through Dewey's philosophy of intelligence. Social decontextualization dims the social makeup of education, hampers intelligent cooperation, and hides the structures that enable intelligent action. The decontextualization of knowledge separates theory and practice from one another and reinforces also other artificial dichotomies by giving some knowledge oversized value. The societal decontextualization of education in turn dispels the societal role of education, threatens its autonomy, and complicates improving

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societies through education. Despite their differences these spheres are connected by the decontextualization of education, that is, education detaching from some of its contexts that should be understood for education to be intelligent action.

The spheres of problems of decontextualization discussed above are related to other current debates in education. For example, competence orientated discourses typical for contemporary education show problematic features in the light of Dewey's critique. Objectives determined in too much detail inhibit the formation of abilities, attitudes, and habits necessary for reflective and adaptive problem solving. Furthermore, such supranational lists of educational competences as 21st century skills (see e.g., Organisation for Economic Co-operation and Development, 2018) appear in questionable light against Dewey's theory as they wish to offer universal solutions to specific problems and suppose that such solutions will not grow old as the world changes. Moreover, such competences that at the moment are useful in working life or useful to employers are not only time-bound, they also contain hidden elements of the use of societal power (Harni, 2015; Saari, Tervasmäki & Värri, 2017). They may also prevent making the future better if the improvements are against the immediate interests of the groups in possession of this power. Such predetermined objectives are also self-fulfilling prophecies as they block alternative futures and the ways to pursue them. The values and ideologies operating behind them are obscured into neutral facts (see e.g., Rinne, 2008; Rinne, Kallo & Hokka, 2004), making their critical scrutiny in education difficult, if not impossible.

The Finnish education export that has increased in recent years easily falls into what Dewey described as building a context-free railroad. Exporting school models from one place to another, without the context of these models or an understanding of the context to which the model is taken, easily leads to undesired results (Wiborg, 2010). This has been at times taken into account so that some companies take the understanding of contexts and readjustment to them as their point of departure (e.g., EduCluster, 2021). From the point of view of curriculum work, in turn, it can be asked in a Deweyan spirit whether it serves intelligent education to narrow the autonomy of teachers (Erss, 2017; Kivioja, Soini, Pietarinen & Pyhältö, 2018) and thus reduce their ability to utilize their own contextualized intelligence.

Despite our good intentions (or partially precisely because of them) our understanding of the world is easily decontextualized. In a new situation it must always be recontextualized. Dewey's theory of intelligent action offers ways to perceive and structure this problem. However, as Gert Biesta (2018, p. 219) warns, in the end Dewey cannot provide us with definite and detailed guidelines for

teaching. The reason is obvious: Action is always dependent on its contexts and perfect universal solutions are impossible. However, the essential thing is that Dewey's philosophy throws down a challenge to continuously and recurringly revise, update, and contextualize education. It is through education that human communities reproduce and reform—maybe even improve—themselves and their environment. If we approve Dewey's view of intelligent action, we must by all means try to provide those educated and those educating with wide-ranging ways to understand and explore the contexts that affect their actions. This gives them a possibility to change and improve society, and to take its development positively and collectively into their own hands. Education needs to be action that is aware of the real world, but we must also understand that the reality may change and that it can be consciously changed. Only in this way can education be a form of intelligent action and help those educated to intelligently solve not only concrete problems, but also ones that have not yet taken shape.

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