Discourses We Live By
Narratives of Educational and Social Endeavour

Edited by Hazel R. Wright and Marianne Høyen

What are the influences that govern how people view their worlds? What are the embedded values and practices that underpin the ways people think and act? Discourses We Live By approaches these questions through narrative research, in a process that uses words, images, activities or artefacts to ask people – either individually or collectively within social groupings – to examine, discuss, portray or otherwise make public their place in the world, their sense of belonging to (and identity within) the physical and cultural space they inhabit.

This book is a rich and multifaceted collection of twenty-eight chapters that use varied lenses to examine the discourses that shape people's lives. The contributors are themselves from many backgrounds – different academic disciplines within the humanities and social sciences, diverse professional practices and a range of countries and cultures. They represent a broad spectrum of age, status and outlook, and variously apply their research methods – but share a common interest in people, their lives, thoughts and actions. Gathering such eclectic experiences as those of student-teachers in Kenya, a released prisoner in Denmark, academics in Colombia, a group of migrants learning English, and gambling addiction support-workers in Italy, alongside more mainstream educational themes, the book presents a fascinating array of insights.

Discourses We Live By will be essential reading for adult educators and practitioners, those involved with educational and professional practice, narrative researchers, and many sociologists. It will appeal to all who want to know how narratives shape the way we live and the way we talk about our lives.

As with all Open Book publications, this entire book is available to read for free on the publisher's website. Printed and digital editions, together with supplementary digital material, can also be found at www.openbookpublishers.com.
Marianne Høyen and Mumiah Rasmusen explore C.P. Snow’s ‘two cultures’ perspective of education through interviews with four newly qualified teachers about to enter the profession for the first time. They ask what professionalism means within their disciplines and examine how childhood and family influences shape the desire to teach. It is clear that disciplinary cultures are firmly embedded, because the humanity students offer ‘why’ responses to questions, the scientists ‘how’ responses.

In his 1959 Rede lecture, the British scientist and physician C.P. Snow introduced the concept of ‘two cultures’ to describe the divide separating the classical humanities and the modern technical and science-based cultures within English society; a division that, he argued, would have unfortunate global consequences. That the human and physical sciences rely on fundamentally different ways of thinking and knowing was not a new discovery; it was recognized in the Renaissance, but at that time polymaths were able to work with both natural and cultural ideas. However, the division grew more problematic as science became more sophisticated. In 1924, seeking to assert the characteristics of the humanities, Dilthey (1924, in Gundem, 1992) clearly articulated the division that Snow saw in his daily contact with Cambridge academics in the UK: ‘We explain nature but understand human life’, is how he clarified the division.

It is clear today that disciplinary boundaries separate the natural sciences and humanities, but difficult to ascertain whether this amounts
to ‘two cultures’ as other dichotomies cross-cut these distinctions: theory / practice, disciplinarity / interdisciplinarity, mode one / mode two knowledge,¹ objective truth / social constructs, just to mention a few. However, the notion of ‘two cultures’ seems a valuable concept, even if it fails to stand up to closer examination. Certainly, the idea of ‘us and them’ within the sciences is far from dead.

In this chapter, we turn to the unified school system in Denmark (comprised of grades 0 to 9) to see if ‘two cultures’ thrive here, too. If, as Snow believed, ‘two cultures’ present a challenge with potential global consequences, it makes sense to analyse school provision, as it is here that the mindset of young students is shaped. Thus, in this chapter the aim is to see if and how schoolteachers identify with the notion of two cultures, and to do so by considering subjects rooted in the humanities as cultural, and those rooted in science and mathematics as nature-related.

Within the education system, several factors signal that such a division exists. Firstly, it is supported in legal texts and explicitly stated in political-administrative documents relating to grades 0–9 and the three-year upper secondary school system. Mandatory school subjects are grouped thematically into cultural and natural subjects, plus practical-musical subjects, and, until recently, this division was used throughout the academic upper secondary school (Undervisningsministeriet, 2016b; 2017). Secondly, in public debate, especially that initiated by the professional bodies for trade and industry and liberal political-economic bodies, it is frequently argued that too many young students are interested in the humanities. Provocatively, those studying for cultural degrees have been described as seeking a ‘master’s in uselessness’ when a natural-science or technology focus would lead to employment (Wiegand, 2014). The humanities are derided as ‘whipped-cream’ disciplines, for science and technology are what are needed in the ‘competition state’ — a Danish version of neoliberalism (Campbell, 2006). Behind these points of view, we can identify the struggle related to bildung (self-cultivation) and what the future generation should learn. Politicians point to science

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¹ Distinguishes traditional objective disciplinary scientific research (mode one) from the more applied practical and often transdisciplinary research that generates knowledge for a social purpose (mode two). Terminology coined by Gibbons et al (1994).
as the answer, not the humanities, even though it is often said that it is difficult, even impossible, to predict the qualifications needed in the future (Malchow-Møller et al., 2017) and that the ‘knowledge society’ will require knowledge as yet unknown (Johansen, 2002) together with insight into innovation and entrepreneurship.

Within general society, a discursive division between the humanities and sciences clearly exists, so now we ask if newly qualified teachers share similarly polarized views and, potentially, the inclination to promote this division within schools. If yes, we seek to discover how the differences are expressed as, to some extent, we share Snow’s belief that a division into two cultures is fundamentally inappropriate. The challenges the world faces (as outlined in the UN’s sustainable development goals of 2017) are better met through flexible ontological positions and a cooperative will. Childhood influences impact strongly on future educational and career plans: it would be both unfortunate and undesirable if the school contributes to socialization into the division into two cultures, and thus cements it.

Background and Context

With the adoption of the Danish constitution in 1849, the school held a position as a unifying and culture-bearing institution (Appel et al., 2013). Shedding its earlier religious associations, teaching became an altruistic vocation focused on the care of the individual. Teachers were to educate and mould the young, preparing them to enter society (Braad, 2005). After World War Two, the educational process became more democratic. Rather than merely transmitting accepted knowledge to children, teachers developed more child-centred approaches, based on a knowledge of child development and the science of learning and rooted in dialogue with both pupils and their parents. In Denmark, teacher education was influenced by Grundtvigian folk high-school ideas and, later, the working-school tradition focusing

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Philosopher and philanthropist, N.F.S. Grundtvig (1783–1872) believed that education should be life enlightening, supporting individual and group development and community cohesion through active and practical engagement with others in lively dialogue relevant to the real world. His beliefs underpinned the establishment of a Folk High School scheme that offers alternative educational experiences to anyone over seventeen-and-a-half. More information @ https://www.danishfolkhighschools.com/about-folk-high-schools/what-is-a-folk-high-school/
on self-efficacy. The 1970s saw an emphasis on equality through education (Telhaug et al., 2006), and since the 1990s the teacher has been construed as a resource in the global market economy, with a role to play in creating the knowledge society (OECD, 2005). Throughout this period the humanities have dominated in schools, as the aim of education was itself humanist (religious upbringing, self-efficacy and democracy). These general aspects of education are normally assigned to the school subject Danish Language and Literature, but, despite more than twenty-five years of endeavour, little progress has been made in giving natural science subjects a similar status. Formally the possibilities exist but internally they are obstructed. Across the two cultures, there is little cooperation, either practically or symbolically, in furthering a mutual understanding (Høyen, 2016).

Teacher education takes place in teaching colleges, institutions with a strong and distinctive culture established in the late 1700s, which, until recently, enjoyed independent status. These colleges reflected the state’s efforts to establish a well-educated corpus of teachers who would function as role models to inspire local societies to aim higher — as until the early 1900s Denmark was dominated by a peasant culture. It was only in 2007, as part of the unification of the system for higher education, that these teaching colleges became part of university colleges (professional institutions to educate nurses, social workers, and early childhood pedagogues). Previously, such professionals underwent ‘medium length, higher educations’ with a significant element of practical work experience, but after restructuring they enrolled on professional Bachelor degrees, part of a general academization of all medium-length educational programmes.

Until 1997 the view that any educated teacher should be able to teach all subjects at all levels was prevalent in teaching colleges, but this is no longer the case, as international OECD tests revealed the reading levels of Danish students to be lower than expected for a country of its standing. As a consequence, there is now a strong focus on teaching competence and student teachers must focus on either Danish Literature and Language or Maths (specializing in either the older or younger age

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3 The ‘education for living’ philosophy underpins Danish practice and is rigorously defended. When writing about teachers, reference is always to teacher ‘education’ rather than the Anglicized term ‘training’.
group) and select a small number of additional subjects. Symbolically this maintains a notion of two cultures, but in practice, within schools (especially smaller ones) teachers often take subjects they are not qualified to teach.

In schools generally, there is often a shortage of teachers of nature-related subjects, so pupils are taught either by teachers who are qualified in other subjects, or by those with a non-teaching degree, for example, a Master’s degree. In order to work on equal terms with the dedicated schoolteachers, such differently educated teachers must study for up to three more years. They enrol on ‘supplementary education’ courses, but these focus on pedagogy — ‘teachers’ foundational competence’ — not subject knowledge.

Teachers’ foundational competence sits within a German-Scandinavian didactic tradition that is fundamentally humanistic and where the question of ‘why’ is absolutely central. Dilthey’s hermeneutics underpins this didactic tradition, placing the emphasis on praxis, and observing four key rules:

1. Because understanding of life can only be gained through lived experience, the practice of education should have priority.
2. Development of educational theory and/or concepts as well as educational phenomena must be examined within the practices of schooling and teaching: theory and practice cannot be separated.
3. When reflecting on educational practice, one must take historicity into account and deal with the context — the past, present and future.
4. One should be always aware of the complexities embedded in the relations between schooling, teaching and learning.

A central aspect of this didactical thinking is the ideal of bildung, the goal of human autonomy. Hence, teaching should be seen as a meeting between an autonomous teacher, autonomous students and content (Willbergh, 2015). The teacher’s job is to be the professional interpreter: the teacher should constantly reflect on which teaching content would make sense to the pupils, be of importance in the concrete/actual context and enable greater connectivity. The paramount aim of education is the
cultivation of ‘self-determination’, ‘co-determination’, and solidarity (Klafki, 2000). An understanding of the children at school as learners is different from the thinking related to curriculum and competences, where educators with an overarching objective plan the steps necessary to reach that goal. Furthermore, it places the responsibility for learning with the individual learner, referred to as a student. The difference is especially significant in relation to teachers’ choice of content. The aim of teaching should be to give pupils the possibility to discuss and develop their views on current themes that are relevant to their worlds. This offers the possibility for personal growth (Willbergh, 2015).

It is expected that a teacher’s professional competence will draw on a narrative where the thinking of bildung dominates. Today this is challenged — at least on the surface — by a counter-narrative dominated by thinking around set competences. Since the millennium, schools have been subject to external forces linked to neoliberal ideas and the ‘knowledge society’, as well as a subsequent focus on prescriptions, tests, and assessment of competences. In our interviews, carried out to examine the possibility of identifying two cultures, we have to search for explanations at several levels, as a subject-related narrative as well as a didactical narrative, for both may play a part.

Method

To address our research question, we interviewed four newly educated teachers, who all had specific teaching experience (as private home tutors or as supply teachers) before commencing their studies. We chose to interview teachers situated on the boundary between teacher education and a professional job, in order to catch them at a time when the teacher-education culture was still strong in their minds but they were not yet embedded into a job at a school and influenced by its specific organizational culture. Two of the informants, Carina and Carl, chose Danish Language and Literature as their primary teaching subject together with History and Music, so are deemed as aligning with the humanistic tradition. The other two, Nico and Nina, chose Mathematics as their primary subject together with Physics and are therefore seen to be part of the scientific tradition. All four teachers are given pseudonyms and these are chosen to reflect their alignment,
the Cs working with cultural [humanities] subjects, the Ns with natural science subjects.

The interviews were carried out in Danish\(^4\) in 2016 and lasted about one-and-a-half hours each. The interviewer was Mumiah Rasmusen, a qualified teacher of a similar age to the informants. We were adopting an open approach that encourages narrative and avoids inappropriately shaping or narrowing the space for meaning (Horsdal, 2016), so our starting point was the question ‘Why did you choose to become a teacher within [the informant’s principal teaching subject]?’. The interviews were conversational in style, aiming to reveal the informant’s understanding of his or her profession described from his or her viewpoint. Logically, this meant that each interview developed slightly differently, making direct comparisons impossible, but we kept faith with the view that a teacher’s understanding of his or her role emerges narratively from the subjective interpretation of his or her life (Goodson, 2003).

We wanted to avoid reproducing the ‘discourse of defect’ related to teachers’ professionalism that prevails, especially amongst those with a peripheral relation to contemporary school (parents, politicians, previous students) so our starting point was that the teachers were able to do ‘everything needed in order to be a good teacher’, and we strove to maintain a neutral position rather than to privilege our own ideas about what the informants should stress in relation to our research question. Consequently, when we began to analyse the research data we had to draw on explorative and reflective approaches (Hammersley & Atkinson, 1995) aware that we were covering new ground in analysing teachers’ understanding from a ‘two-cultures’ perspective and therefore must proceed with an open mind.

Our process was inspired by techniques from Grounded Theory (Charmaz, 2000). Within the emerging main themes, we searched for indications of coherent narratives (Clark & Rossiter, 2008), postulating that their coherence might reveal embedded lines of thought relating to Snow’s two cultures. Within the interviews we found various layers of narratives:

- From what we were told directly, we could clearly identify the two cultures. The informants understood themselves through

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\(^4\) Interviews translated by authors.
associated trappings and practices, and clearly distanced themselves from the opposite culture.

- Within each of the two academic traditions we could trace threads that identified a collective, fundamental narrative related to teachers’ professional reflections.

- We could also identify narratives that related to the broader discourses in society about the role of the school. The teachers’ narratives showed a deterministic compliance with correct or acceptable feelings, thoughts, ideas and actions.

The interviews also offer narratives that run transversally across the three levels: about their childhood and youth, about their relation to school, and about making the decision to work as a teacher. At the immediate descriptive level, there were a lot of stories about their childhood years in school, successes and failures, experiences and reflections — tales shaped into stories, which, once constructed, can be told over and over again (Polkinghorne, 1995). The transcripts clearly show that in their ‘tellings’ all four informants make use of such stories, especially when the dialogue touches upon their own childhood, youth and schooling. But it is also clear that, often, when the informants talk about their relationships to the teaching profession, the relationship goes beyond what is traditionally voiced in political discourses relating to the educational system.

The Stories: Why Choose to Become a Schoolteacher Within One of These Traditions?

When explaining their choice of a primary teaching subject, all four spontaneously claimed that an interest had developed during childhood and adolescence. This was especially the case for the two science teachers, Nico and Nina. For Nico, school science was legitimized through association with his parents’ work. The nature-related subjects also offered the opportunity to finish homework quickly and proceed to other more interesting pursuits, such as family sporting activities. In contrast, Nico found literary analysis impossible to complete quickly and confidently, as there were no right answers.
He remembers the culture-related subjects as senseless. For Nina, nature-related subjects also enabled connection to her family; they investigated things together nearly every day, sometimes motivated by Nina’s homework but often just through everyday life. Nina’s father was a self-taught computer scientist and often brought examples of his work home with him. Examination and experimentation played a central role in Nina’s upbringing.

The humanities teachers told similar stories of learning and interest embedded in childhood and adolescence. Carina grew up in a tight-knit community with shared values (one that she later realized mildly excluded those who did not embrace the same beliefs). Her parents came from different European cultures, both with strong traditions that they upheld; one rooted in the Danish folk high-school tradition, the other in a southern European artisan-family tradition where arts and crafts provided a shared livelihood. In contrast, Carl’s parents worked ‘with numbers’, so his early childhood was not particularly orientated towards the humanities, but, growing up in the capital, his friends introduced him to various sporting and musical communities and through these he became aware of an ‘emerging’ multiculturalism (at that time a relatively new phenomenon in Denmark). They also enabled him to experience the processes that underpin democracy. His parents firmly believed that everyone should find the way in life that suits them best and Carl did just this, for after training as a Maths teacher for a year, he switched to teaching education.

Though they followed different paths, all four participants developed a sense of community through childhood and engagement with youth groups that encouraged individual participation (in sport or music, for example) within a broader shared framework. These social collectives were supportive environments enabling the individual to develop a sense of ‘I’ can do this and ‘we’ can do that together, but not a sense of groups with distinct goals (as found in a political party, for example). For all four participants, the experience that ‘we are able to do something together’ and especially the personal realization of the value of participating and belonging, was a driving force for becoming a teacher. They wanted to guide others to participate in similar communities.
Narrative Understandings

According to the literature, when asked what inspired them to teach, teachers often mention a teacher they met as a pupil (Lortie, 2002). However, this is not the case with our informants: we have seen that instead they pointed to their membership of communities. Family practices and friendships seemed to be more significant than school experiences, something that Lortie (ibid.) did not find surprising.

Now we ask: which narratives do the informants draw on in relation to their understanding of their role as a teacher? We will see that they embrace the culture of their primary discipline, drawing on an embedded narrative that exists in its own right at the same time as the other culture appears as a counter-narrative (Bamberg & Andrews, 2004). Next, we examine the larger professional narrative of teaching that the informants also draw on, one that is acquired through their recently completed degrees, setting expectations for what they will find in their future jobs as qualified teachers. From a political-administrative perspective, a teacher's job is to fulfil professional expectations laid out in the legal framework for schools (Undervisningsministeriet, 2016a) but in reality, the informants talk far beyond the political framework, offering strong professional and institutional narratives. Finally, we turn towards the social discourses which shape both the school and the teachers’ roles.

The Narrative About the Teaching Subject

In the stories told in the dialogue between interviewer and informant, we find that the participants make reference to and distinguish between their ‘own’ and the ‘other’ culture.

From the humanities teachers, we find two dominating themes related to the core of the subject and the thinking related to it. Most significant is the understanding that the humanities offer pupils insight into the diversity of human perspectives on existence. Through acquaintance with literature, claim the informants, we learn to know and understand that humans have different backgrounds, roles, interests and difficulties. This, they argue, provides pupils with material to inform their own reflections about the world, and, irrespective of age and background,
makes humans more tolerant, insightful and critical in their own lives. The informants further stress that language, not just spoken and written but also that of art and music, teaches pupils to communicate — to converse, to enter a dialogue, to argue and thereby make an imprint on the world.

It is striking that the humanities teachers are so occupied by their own subjects that their relationship to the other culture, science, is minimal; subjects related to nature are simply of no interest and they cannot be bothered to engage with them. The counter-narrative is apparent as passive resistance: Carina says that no one in her family is involved with numbers or nature-related subjects, and she herself is ‘mega-bad’ with these themes. However, she does reflect that she holds a formless but significant antagonism towards science and wonders if there is something wrong with her brain, circling around the concept of dyscalculia without specifying the term. For Carl, his engagement with the humanities is such that he simply has no room for the sciences. His ideas about being a teacher are amply fulfilled within the humanities frame, but he mentions science as a possible counterbalance to faith and religion. In principle he is open to including some nature aspects in his teaching, but then the mere nature association makes him unsure. He considers the possibility of an interdisciplinary approach and reflects on the idea of producing a story with his pupils: ‘[…] add some nature-related concepts, such as beech leaves or what-the-hell-is-their-names, or something — eh, something about the food chain or something about that the birds eats the larvae which makes the larvae afraid of the birds and then they become the enemies in the story’. Thus he muses, but he uses vocabulary from the humanities, not from the sciences.

The informants working with science subjects are similarly engaged in their field, but for them the idea of the ‘aha moments’ these subjects provide is dominant. Without addressing this directly, the informants take for granted that the world exists and is awaiting man’s discoveries. Both informants are preoccupied with being able to participate in this discovery, capture its elements and, as a teacher, pass this experience on to their pupils. For these informants, science subjects seem to offer an underlying security as, unlike the humanities, science offers logical methods to follow. In this way, science offers possibilities for agency to independent- and knowledge-seeking individuals. It implies
independence from the school and escape from the whims of colleagues and reduces possible failures of competence. The natural scientists reveal a distinct opposition to the humanities. In Nico’s eyes, they hold nothing of interest, either intrinsically as subjects or for society in general. He states several times that he cannot understand that ‘poems or Swedish texts’ (the latter a mandatory component of the Danish curriculum) make sense or are compelling. In contrast to Nico’s clear opposition, Nina shows less resistance. She sees Mathematics as a form of language, and has carried out observations of dialogues between Maths teachers and pupils, but her reflections are personal; she makes no attempt to seek explanatory frameworks within the humanities. However, she does see science as ‘liberating’ and would like more girls to engage with it.

In their portrayal of their own and the opposing subject’s cultures, the informants demonstrate that Snow’s division is relevant within schools and that it is the culture and mindsets of the teachers that constitute the divide. Yet, and paradoxically, the teachers describe their enthusiasm for their subjects as emanating from family and leisure activities rather than from school per se, but this is challenged by their description of their own teachers’ enjoyment of the subjects they taught, as well as by their accounts of their teachers’ recognition of the informants’ interest in their subject: they talk about feeling successful in class after ‘being noticed’ by their teachers, and conversely of distancing themselves from subjects where this did not happen. However, for the informants, by far the most important aspect determining their choice of teaching subject is their belief about how their subject can educate their pupils. Hence, the informants see their students’ opportunities for bildung as essential and focus on how they can support this.

The Narrative About Bildung

This emphasis on the possibilities for fostering bildung can best be understood through a general discussion of this concept. As already stated, it has been central to teacher education historically and it has connections with practical philosophy, especially the work of Kold and Grundtvig in Denmark (Hall et al., 2015; Korsgaard & Wiborg, 2006; and for a more historical account, Martin, 2018). Academization pushed discussions about bildung aside in favour of a more application-oriented
competence perspective, leading to ideological infighting in university colleges about the aim of teacher education. Thus, within teacher education the informants experienced polarized viewpoints divided along ideological and cultural lines.

Like adjusting to the workplace, to be educated within a profession necessitates embracing a specific understanding of practice (Schön, 1983). For the teaching profession this is a practice that, at its core, involves debates about practical and philosophical questions that are marked by ideological fights. If, inspired by work on ‘social movements’ (Benford, 2002), we view teacher education as the carrier of a collective but contested narrative, and teacher education as the place where this narrative is negotiated and re-shaped by student teachers in their attempts to attain professional skill, we can find traces of these fights in the informants’ stories. When we focus our analysis on what the informants tell us about teachers’ knowledge base in relation to the question, ‘what should be taught?’, we see that the discussion about ‘why’ stands in opposition to ‘how’.

It is noticeable that when asked about professional practice, ‘why’ responses are dominant within the humanities, ‘how’ responses within the natural sciences. Carina focuses on the atmosphere in the classroom and on collective wellbeing in a broad sense, and literature is her starting point to achieve this. She sees it as her task to enable all students to prosper by creating an understanding that there are many ways to be ‘normal’. She gives children opportunities to reflect on the habits and views that they bring from home, to grasp that these can be different for other children. For example, in relation to religion, she finds it important to show her pupils that girls from an Islamic background have things in common with girls from a Christian background. As a teacher, Carina says, it is your duty to promote diversity; all else is futile: ‘Learning happens in situations where you feel accepted and where everybody is okay with each other, doesn’t it?’. Carl is keen to get his pupils to imagine things, and to express themselves, and he would like them to communicate their ideas in story form. He explains that he likes to present the pupils with all sorts of universes and then ask the pupils to fill them, visually and with text. It can be an everyday universe (such as the family room they remember from childhood) or a world described in literature (prompting Carl to discuss the author’s life, and the social
and cultural context underpinning the text, to make the text meaningful to the pupils). He wants to teach his pupils that things can ‘speak’, to encourage them to use their imaginations and to be creative in order to understand literature, language and the world around them.

Within the science subjects, the question of ‘how’ is more distinct. Nico says that as an adult he has realized that not everybody finds science as fun and interesting as he does. He demands that teaching must be fun — that is what he wanted in his own schooldays and this informs his reflections on his teaching: ‘I have realized that a lot of pupils find Maths boring when the answers are fixed [...] therefore I try to open up the subject a bit to appeal to pupils who reject what I think is cool’. Nico’s solution is to make his teaching problem-oriented, because then he thinks that he can attract the bored pupils by showing that there is more than one way to find the correct answer. However, as a new teacher Nico finds that he lacks the experience to do what he wants with the pupils. He clearly reflects back to his own schooldays when he says ‘it might be that I think something is cool but if I have to teach others, then I have to respect that they have other opinions than I have — I have to find a way to cope with that’. In Nico’s time as a pupil, he encountered humanities teachers that failed to do this, and he does not want to be such a teacher himself. Nina’s reflections circle around encouraging her pupils to develop curiosity and engagement with science. She finds that many pupils are afraid of interacting with scientific ideas and she wants to tear that barrier down. ‘Just making a start’ is something Nina knows from her childhood, when it was customary for the entire family to dive together into something that they found exciting, until they figured out how it worked — it was highly satisfying when they experienced an ‘aha moment’. Nina follows the same principle with her pupils in school and with children who participate in courses she teaches for free; these courses are offered by voluntary organizations to encourage more young people to engage in science. Nina is also interested in exploring what pupils or students do not understand. She has noticed that teachers’ answers often go over their heads, perhaps because a common scientific language has not yet been established. Overall, the ‘two cultures’ are apparent in the didactic thinking that underpins the informants’ discussions of their teaching subjects.
Within social-movement narratives, a great deal of effort is expended on maintaining a narrative that is distinctively different to that of opposing movements (Benford, 2002). In relation to the bildung aspect, we see that there are two tendencies that to some extent travel in the same direction. Firstly, within the humanities the informants are focused on the individual pupil and his or her place within the class as a collective; within the sciences, informants also claim that they are interested in the individual pupil but have no intention of incorporating their teaching into a more general curriculum, as some scholars within science have argued should be the case (Sjøberg, 1998). Secondly, within the ideologically riven teacher colleges, didactically the humanities traditionally create ‘why’ narratives while the sciences create ‘how’ narratives. ‘How’ is anything but a new question, but today it aligns seamlessly with the application of evaluation criteria for usefulness, which creates new baggage that weighs these narratives down.

Finally, all four informants stress that, to be an effective teacher, it is imperative that they can engage personally in the development of their teaching; they can only teach subjects they are passionate about. Whatever their disciplinary background, their views echo traditional thinking around bildung: they see the professional teacher as one who orchestrates the interplay between the teaching subject and the needs of the actual class — an endeavour termed ‘the pedagogical meeting’ by the German existential philosopher Bollnow (Koerrenz & Friesen, 2017). But nowadays, schools increasingly buy ‘fixed packages’ from commercial publishers who specialize in teaching materials, or ‘communication-optimized courses’ from external organizations (private companies, NGOs, semi-public cultural institutions). Despite this trend, the informants see developing their own (or adapting existing) teaching materials as a significant part of their professional identity.

Thus, through these interviews, the informants demonstrate that they have absorbed the disciplinary values embedded in their teacher education but that this hasn’t yet been challenged, possibly because of their short professional careers. As a teaching student, one’s position is that of an agent who will be edged into the profession through an education and a degree qualification. In order to qualify, the student teachers have to learn the disciplinary culture from the teaching institution and then re-orient themselves to fit into the practical and
collaborative work ethos they find in schools on gaining employment. The ethos within the teaching profession no longer naturally augments that of teacher education, a finding that leads to discussion of the role of the school in society.

The School in Society

To reiterate, the idea of bildung is a strong element of the informants’ stories about their subjects, and in the collective professional narrative about teaching. However, we also learned that this narrative differs between the sciences and humanities.

When the informants talk about the schools in which they currently work, they all make reference to broader society. Their stories swing between stressing their opposition to what they see as the contemporary discourse within education (one which values competences and tests) and their desire to be the teacher they want to be. Carina highlights this dilemma:

[...] instead of giving space and time to the immersion education should be [...] to me, there is a huge discrepancy between how we really think we should educate children and what we actually educate them into. As teachers we think it is immersion, reflection, citizenship and democracy. But what we really do in class and during the lessons, that is much more goal-oriented and ‘teach-to-the-test’-like...

Is the reason for Carina’s conflict simply the fact that humanities teachers ‘hold on’ to the democratic discourse embedded in welfarism and hence to an understanding which provided the individual teacher with better conditions for fulfilling their vocation? This is often the claim made by politico-administrative voices. But are other matters at stake?

Let us return to our earlier claim that the globalized knowledge society needs more people to work in the natural sciences and technology, and hence not in disciplines that cannot be directly converted into economic growth. This view, of course, influences views of the role of schools in society and thus discourses about schools, too. The question is: have neoliberal discourses merely superseded those of social welfarism, with the result that the question about the school’s role has been changed from a traditional ‘why’ to a newer ‘how’? Or are other aspects related to the idea of globalization and a knowledge-intensive society relevant?
A closer look at changes in the teacher’s role and the notion of bildung may shed some light here.

From the mid-twentieth century, teachers were no longer the authority for knowledge in Danish society. No longer local role models or part of the local cultural elite, the teacher was cast as a carer whose role was pedagogic (Schmidt, 1999). At the same time, the growing population, the increased educational achievements of the parental generation, and consequent greater critique of authorities and regimes of authority, resulted in the status of teachers in society being challenged. Rather than rely on their collective role as knowledgeable authorities, teachers had to assert their own personal value as individual and pedagogical power became the ideal. Furthermore, it became increasingly difficult to establish general ideals for education within society. Scholars in the field argue that the globalized world entails a broadening of the traditional idea of bildung (Hammershøj, 2009) but we need to consider the historical perspective here. In earlier times, people were born into specific social groups where styles of upbringing maintained group coherence, but today, as Giddens argues, we believe in individualism, and settled social groups have been replaced by volatile communities who share the same tastes (Giddens, 1991). Referring to the French sociologist, Alain Ehrenberg, we could argue that the former division between the legal and the forbidden is today replaced by a conflict between the possible and the impossible. Therefore, bildung is now about having experiences that relate to the kind of person we want to be (Hammershøj, 2009).

We can, therefore, argue that the schools that informants will work within are characterized by two somewhat conflicting discourses. One demands that teachers as individuals provide a knowledge space where pupils can learn, but that teachers should do this mindful of the knowledge society’s educational ideal, according to which experiences gained in loosely-knit communities are central. The second focuses on application and usefulness to the economy, and relates to the idea that globalization is linked to knowledge as the basis for financial growth.

If we were to identify a collective narrative that informs teachers how to be good at what they do, this would draw on a fundamental understanding that best corresponds to the narrative from the humanities. These teachers, talked about understanding various perspectives, and introducing students to different communities to
extend what they already know. Engaging in didactical thinking related to ‘why’, the teacher might be guided to seek as yet unknown communities, not just the ones that they already know through their own experience. The science teachers conformed less to this collective narrative; they seemed to identify more closely with their personal school experiences, and are apparently more attracted toward individual learning, employing practices that appeal more to the individual pupil and the possibilities for providing ‘aha’ experiences. These informants draw on science as their knowledge base but accept that not everyone finds science subjects ‘cool’. Their didactic interests are directed against the methodological ‘how’, and they do not consider the benefits of learning science subjects within a community, failing to see communities as open to such possibilities.

Thus, the informants relate differently to the contradictory discourses that shape society’s views on the role of the school: science and humanities teachers appear to incline towards different aspects of those discourses.

**Conclusion**

The point of departure for this chapter was to discuss whether ‘two cultures’ exist amongst schoolteachers, akin to those within academia. ‘Two cultures’ do exist, not just in relation to ways of thinking within the teaching subjects themselves but also in relation to the teachers’ professionalism and didactic thinking. We learned that the informants value different things when reflecting on their teaching, but they all have specific ideas about their teaching subject related to the school and to their pupils. Furthermore, they draw from different elements in the discourses that shape the school’s role in society, finding aspects that best fit with their embedded ways of thinking.

Altogether, the ‘two cultures’ remain relevant and actively articulated and may well continue to be so. Broadly speaking, humanities teaching supports society’s cultural development and its changing community structures, and science teaching supports application, immediacy and utility.
Snow warned that the division between the two is unfortunate and even dangerous, and for society it still is. Some politicians claim that science never has and never will be able to be part of general education, or *bildung*, even if scientists want it to be (Sjøberg, 1998) but perhaps the two traditions could learn from each other, even though their ontological background differs. Learning about each other’s way of understanding, being more explicit about values, paying attention to a social gathering of any kind as not just an entity but as a place for being together might benefit both. The survival of future communities and the need for workable (useful) solutions present challenges to both humanistic and scientific cultures.

References


5. Science and Humanities Teaching in Danish Schools


