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Whose voice is it anyway? Narrative perspectives within the Scottish and Swedish Science curricula

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Abstract

This study explores the form of curriculum documents and its implications for the enacted curriculum. In this study, the narrative voices that appear in the Scottish Broad General Education phase and the Swedish Compulsory phase of the curriculum are scrutinized in relation to the most likely reader of these documents—the teacher. The study adopts a critical hermeneutic approach to documents relating to the Swedish and Scottish Science curricula, focusing on the primary and lower secondary school phase of education. In addition, the analysis utilised the concepts and categories from narratology as an analytical framework that illuminates the emerging narrative voices in the curriculum documents. Both countries are similar in terms of "the teacher" not appearing in a prominent role but differ in terms of how teachers are framed from a narratological perspective. While the Swedish science curriculum appears to be a very rudimentary narrative, resembling "stage directions" for teachers' activity, the Scottish science curriculum contains a variety of different narrative voices, although none of these puts the teacher in an active, autonomous or decision-making position.

KEYWORDS
curriculum studies, narratology, science curriculum, Scotland, Sweden

INTRODUCTION

This paper is about the form of curriculum documents. More specifically, narrative perspectives appearing in Scottish and Swedish curriculum documents related to the Sciences are scrutinised and their impact on the reading and understanding of those documents is discussed. Since this kind of study and its theoretical and methodological bases are uncommon to the field of curriculum studies, a detailed description of the background is necessary as follows:

> "Whenever a message is conveyed, whenever something is reported or told, we encounter a mediator, the *voice of a narrator* becomes audible". (Stanzel, 1979, p. 15 [our translation and emphasis])

Curriculum documents convey messages about what societies, represented by their governments or other state institutions, expect from schools and teachers in relation to pupils' learning. This message is delivered in different forms and to different levels of specification. It can contain information about the content, the methods or outcomes of teaching. It can also contain information about what pupils are expected to achieve (e.g., Linde, 2007). The message delivered by a curriculum document generally comprises the following elements: the content, methods and evaluation of the teaching and learning that are expected to happen in the classroom and the perspective from which this content is conveyed.

This study forms part of a series that compares the Scottish and Swedish Science curricula at different levels of curriculum making (Deng, 2011). The overarching research interest focuses on how the different levels of curriculum making relate to each other, and what operations are necessary to translate the programmatic level of curriculum making into meaningful learning experiences at the classroom level (Priestley et al., 2021). In the first study (Day, & Billmayer, 2018), we scrutinised the orientation of the curriculum documents' contents in relation to scientific literacy, where we dealt with the first kind of message delivered by the curriculum documents, that is aspects of learning and teaching content, methods and evaluation.

The aim of the current study is to contribute to our understanding of the interactions that take place at the *interface* between the programmatic and classroom-level of curriculum making (Deng, 2011). What scope of interpretation do the distinctive narrative voices evident in the Scottish and Swedish curriculum allow for the teacher?

This study focuses on the curriculum documents encountered by teachers which drive their everyday practice. There are a number of other studies that have addressed the political, public or academic discourses in the wake of the documents' production, in Sweden (cf., Ringarp & Waldow, 2016; Sundberg & Wahlström, 2012; Wahlström, 2016); and in Scotland (cf., Gillies, 2006; Priestley & Biesta, 2013; Priestley & Humes, 2010; Reeves, 2008).

Biesta et al. (2017, p. 38) conducted a small-scale ethnographic study "on the role of teachers' talk in their achievement of agency" in Scotland. They found that "the talk and vocabularies of some teachers [in their study] appeared to be rather limited and closely connected to policy discourses" (Biesta et al., 2017, p. 52). Following this, it is particularly relevant to study the documents representing policy discourses, e. g. curriculum documents, for the impact they have on the teachers' own decision-making not only about the content,

but their perspective on the (educational) world constructed in these documents. We argue that it is the perspective of the narrative and the voice of the narrator that develops and consequently limits that world and thereby constrains teachers' discourse and vocabulary.

We apply methods of literary criticism to the curriculum documents, treating them as narratives, and ask what narrative voices and thus narrators appear in the Scottish and Swedish Science curriculum documents, and how these narrator(s) relate to the likely readers, the teachers. In order to explore these questions, this study is framed using narratological theory according to Franz Karl Stanzel (1979). To our knowledge, this kind of study has not been undertaken in curriculum or educational policy research. The findings of this inquiry are then used as the basis for discussion about the role teachers play in the process of curriculum making.

BACKGROUND

According to Deng (2011) curriculum making operates on three levels: the institutional, the programmatic and the classroom level. The institutional level, that is curriculum policy, represents the *interface* between society, culture and schooling and addresses the question of what is considered to be valuable knowledge and skills in a particular society. As these evolve as a consequence of political and societal discourse, curriculum making can be construed as social practice (Priestley et al., 2021). The programmatic level is represented by the curriculum documents and related materials used by teachers to orient classroom activities which operate at the *interface* between the syllabus and the enacted curriculum at the classroom level. Deng (2011) suggests that at the programmatic level a "theory of content" and a set of conditions or criteria about teaching, assessment and professional development inform how teachers navigate between the programmatic level and the classroom level. It is to this point that this paper attends. By the classroom level of curriculum making, we are referring to how teachers interact with pupils in relation to curriculum documents and policy.

Both Sweden and Scotland have undergone educational reforms within the last decades, leading to major changes in each country's (Science) curricular documents. New Science curricula were introduced, in Scotland under the auspices of *Curriculum for Excellence* (CfE) in 2009 (Education Scotland, 2009a, 2009b), and in Sweden in the *Curriculum for the compulsory school, preschool class and the recreation centre* (Skolverket, 2011). The Scottish and Swedish reforms resulted in Science curricula that were quite different from their predecessors, challenging traditions and assumptions about how curriculum documents are organised and what they should include. Sweden went from a content and process to a goal- and outcomes-oriented curriculum (Sundberg, 2015), whereas Scotland went from a process- and outcomes-oriented curriculum to one based upon experiences, skills and capacities (Humes & Priestley, 2021). Both follow the international curriculum policy trend common to several nations in Europe where national curricular documents "tend to be characterised by a structural basis in outcomes sequenced into linear levels, and a focus on generic skills or capacities instead of a detailed specification of knowledge/content" (Priestley, 2011, p. 221). These developments are more visible in the Scottish than the Swedish curriculum (Hizli Alkan & Priestley, 2018; Wahlström, 2016). In the case of curriculum making across the multiple levels in the Scottish context, it is important to acknowledge that the original intentions of the Scottish curriculum have been variously translated and refracted through the prism of other agendas, to an extent that it can be argued that the enacted curriculum does not necessarily accord with the original intentions as set out in policy (Humes & Priestley, 2021).

Scotland and Sweden have undergone similar developments at the institutional level of curriculum policy making, but they have resulted in very different documents at the

programmatic level, as we shall illustrate. Science is an interesting reference point for international comparison at all levels of the curriculum since Science as well as Mathematics (as school subjects) are based on scientific disciplines that are assumed to be universal. They are therefore assumed to be less sensitive to variation between national contexts in terms of content knowledge, problem-solving and inquiry skills than other areas of the school curriculum such as History, Civics or Literature. This is underpinned by the fact that large-scale transnational assessments of student attainment such as the OECD's (2021) *Programme for International Student Assessment* (PISA) focus on children's ability to use their reading, mathematics and science knowledge and skills. Science curricula are non the less not neutral entities given their social construction. It is generally recognised that national politics and different ideological perspectives on Science as subject and human endeavour influence the choices and political decisions upon which the curriculum is formed, although the second law of thermodynamics or concepts such as osmosis, diffusion and resistance are the same in Sweden and in Scotland. Whether or not such concepts are part of the Science curriculum is the result of political and ideological debate. However, the content itself, once chosen, is generalisable to other contexts. Pedagogical, political or indeed formal differences and similarities, to name but a few aspects, become therefore all the more evident, when comparing Science curriculum documents from different times and places.

While the professionalization of teachers is an explicit aim of educational policy (reform) and has been used to legitimise curriculum reforms at the programmatic level throughout Europe (Aili & Brante, 2007; Priestley et al., 2015), there has been a concomitant emphasis upon strengthening teachers' autonomy within the professionalization discourse (Lucas & Nasta, 2010; Mayer, 2014). Despite policy-makers' intentions to increase teachers professionalism and enhance their autonomy, it is debatable whether such curricular reforms have achieved this aim. Questions then arise as to how teachers as professional decision-makers are facilitated or hindered by certain policy documents (Bergh & WahlstrÖm, 2018).

Two traditions have historically influenced curriculum formation in Sweden from the 1800s according to Hansén and Sjöberg (2011). First was the German, continental idea of *Didaktik* and Johann Friedrich Herbart's idea of a *Lehrplan* to structure and organize contents and aims of schooling. From the second half of the twentieth century, the Anglo-American *curriculum* tradition, based on the works of John Dewey, has increasingly influenced both Scottish and Swedish educational policy-making and thus curriculum formation. These two traditions differ in their orientation at state/governance and school/classroom level as well as in regard to how teacher education is organized. For example, the *Lehrplan* tradition is centralised at state level, with a focus on subject knowledge and national exams. At the school/classroom level, it focuses around subjects taught by specialized subject teachers. The *curriculum* tradition, on the other hand places the pupil at the centre, taught by teachers who are generalists. This historical dichotomy between *Lehrplan*/*curriculum* is a useful heuristic for categorising curriculum documents. However, as Wermke and Prøitz (2019) have shown, this dichotomy is of limited validity, not least because of its overemphasis on state governance. A similar tension in curriculum policy making emerged in Scotland during the development of CfE. Day and Bryce (2013) following the line of argument pursued by Fensham (2009), suggests that CfE departed from the prevailing Anglo-American tradition, moving towards the Germanic tradition of Didaktik/Bildung. In the “Germanic tradition”, the policy image of the curriculum is transmitted directly to teachers with elaboration in a sample examination or a set of standards, but the development of materials is entrusted to the professional expertise of the teacher. Luke et al. (2012) suggest a similar distinction can be made when characterizing different curriculum documents as either having *disciplinary* or *educational* expertise behind their formation.

The difficulty in engaging with debates regarding *Curriculum, Didactics and Bildung* arises from the point made by Hudson and Myer (2011, p. 24) that "… didactics does not exist in Anglo-American tertiary education … we have to accept that one of the basic concepts of continental didactics, Bildung, also finds no equivalent". We understand didactics to be the theory and practice of teaching and learning (Vollmer, 2021). Coriand (2017) defines didactics more explicitly as a theory about the relationship between teaching and learning, acknowledging the dialectics between instruction (German: *Erziehung*) and *Bildung*. In the Scottish context, the fact that the science curriculum is inextricably linked to the four capacities—*Responsible Citizens, Effective Contributors, Successful Learners and Confident Individuals*—by design, and is oriented theoretically as a curriculum that develops children and young people to be scientifically literate citizens (Day & Bryce, 2013), suggests that there are connecting points between CfE and the Didaktik and Bildung tradition, specifically through the way that the term pedagogy is understood and applied, and in the way that CfE is generally oriented. We also agree with Hudson and Meyer (2011) that the didactic triad offers a tool to support our reflections about all teacher- subject matter—learning processes. These lie at the heart of the "instructional" process and more specifically underpin the complex interaction between teachers' attitudes and beliefs as to the purpose of the curriculum, their espoused and embodied values, and the professional judgements and actions taken by them in terms of planning and implementing lesson.

Curriculum documents as narratives

We suggest that curriculum documents can be read as *narratives* about what is expected to go on in classrooms and contain clues about what can be done and how it may be done at the classroom level of curriculum making. Expected activities can be different forms of teaching and learning, or different discipline-based subject content. The persons—or characters—likely to appear in a curriculum document are teachers, pupils and head teachers, but also parents or other pedagogical staff such as teaching assistants or additional support for learning staff. The focus of the current study is on the role that the teacher ought to play according to the curriculum and how they might fulfil that role.

Curriculum documents are the projection of those currently governing policy regarding education, answering such questions as what, when, why and how pupils (of certain ages) are expected to know or learn. The receivers or readers of these documents are teachers, whose task is to transform the institutional and programmatic form of the curriculum (as contained within the curricular documents) into the enacted curriculum as learning episodes within the classroom.

Drawing on Michael Apple's work, Luke et al. (2012) argue that not only the content, but also the form of a curriculum document has the potential to influence how the curriculum is enacted at classroom level. Petrina (2004) suggests that curriculum theorists have neglected the (technical) form of curriculum documents and their relevance for curriculum making on all levels but we would argue that it is important to acknowledge the extent to which the technical form of the curriculum leads the narrative perspective. The current study attempts to bridge part of this gap by examining the narrative voices of the Scottish and Swedish science curriculum. In addition, the particular form of both the Swedish, but especially the Scottish Science curriculum have not been recognised to date. It has been stated that "CfE is notable for its structure" (Hizli Alkan & Priestley, 2018, p. 2), in terms of its organisation around capacities (Priestley & Minty, 2013). As we will show in our analysis, this actually may be one of its less spectacular "idiosyncratic features" (Priestley, 2011, p. 222). The form of the Swedish curriculum has not received much attention either.

Typology of narration

Narratology studies different kinds of (literary) narratives, their structure and impact on the reader's perception of the narrated world with the focus being on the *narrator*, whose voice tells the story or from whose perspective the narrated world unfolds. Thus, the narrator controls the reader's knowledge about and attitude towards the world within the narrative. Depending on who the narrator of the story is, and what their position relative to the story is, the reader may sympathise or not with them, feel informed or confused, involved or detached. The narrator must not be confused with the author. The author is, in contrast to the narrator, not part of the reality of the narrative. They are not the same person.

Two theories that extensively describe and analyse different types of narrators have grown and declined in influence within the field of narratology over the last forty years: Franz K Stanzel's (1979) *typology of narration* and Gerard Genette's (1980) *narrative discourse*. While Genette's theory explains every narrative perspective that can be imagined, Stanzel built his theory of the narrator on existing literary works. Italian literature scholar Paolo Giovannetti (2013) praises Stanzel's theory on account of its closeness to the reality it is meant to describe in contrast to Genette's, whose theory he describes as “too formalist, too abstract, too alien to the text-reader dialectics” (Giovannetti, 2013, p. 164). Stanzel, on the other hand, created a typology of narrations to be used in literary criticism that is similar to the *ideal types* (cf., Weber, 1988) common in the social sciences. Stanzel's typology distinguishes different narrators based on three dimensions that can be found in the visual representation of Stanzel's theory known as the *typological circle* (1).

The guiding question for Stanzel's theory of narration is *who is the narrator of a particular text?* Whether the narrator is *visible* within the narration or remains *invisible*, marks the difference between *telling* or *showing* what is—or has been—going on in the world of the narrative. Narration can therefore be characterised either as *mediate* or *immediate*. The first kind can also be named a *panoramic presentation* and is perceived as an actual narration—told by one person to another—whereas the second one uses a *scenic presentation* with dramatic dialogue as its purest form which is “strictly speaking not a narrative […]” (Stanzel, 1979, p. 71). To do justice to the fact that not all narrations contain a clear narrator character, we have chosen to use the broader term of *narrative voice* instead amid our narratological analysis of the curriculum documents.

A comparison of William Shakespeare's classical *Romeo and Juliet* and Arthur Conan Doyle's *Sherlock Holmes* novels illustrates this point. On the one hand, we have a play, where the story is not *told* but *shown* to the reader/the audience. Everything that is going on in the world of the narrative is visible to the reader/the audience, and they must witness Romeo's dramatic suicide moments before Juliet awakens from her deathlike coma and the ultimate tragedy of their deaths. The audience here knows more than the characters in the play, as they have an *omniscient perspective* on the story. Many of the Sherlock Holmes novels, on the other hand, are told in retrospect by the character of Dr John Watson, who also is part of the remembered adventures. Here, the reader cannot know more than the narrator—who in this case appears as an outspoken character. The readers' knowledge about the world of the narrative is limited and filtered through the narrow perspective of the narrator.

In order to describe the manifold shapes of narrators appearing in literary works as detailed and specific as possible, Stanzel (1979) identifies three aspects of narration: *person, perspective* and *mode*. These three dimensions form continua which are represented in the typological circle as boundaries, separating the circle into sextants. *Person* distinguishes between first- and third-person narrators, with the narrator's and the narrative's realms of existence being either identical or different, answering the question whether the narrator is part of the story or not. *Perspective* answers the question of whether the narrator has an

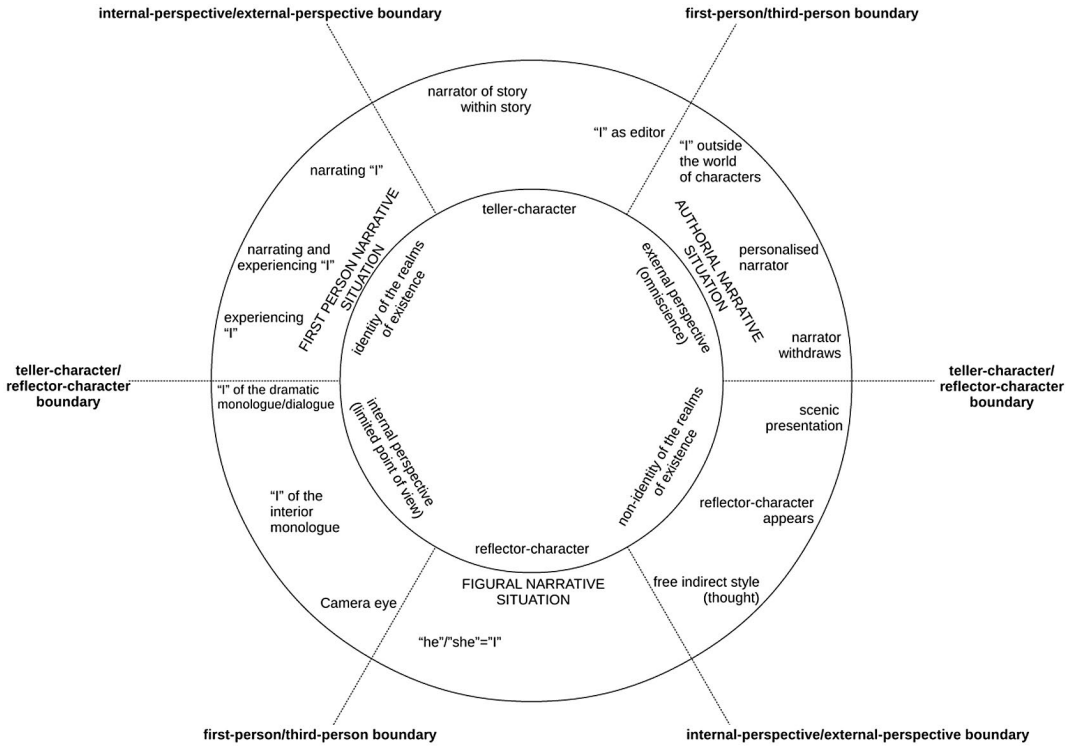

FIGURE 1 Simplified typological circle according to Franz Karl Stanzel

external or internal view on, and a respectively omniscient or limited knowledge of the narrated world. Finally, *mode* is based on the distinction between teller- and reflector-character of the narrator (Figure 1). Is the narrator clearly speaking in the role of somebody telling the story, as for example John Watson in Sherlock Holmes, or is the story told by following a certain character without him or her really raising his or her narrating voice?

The ideal typical teacher reader

By constructing this set of typical narrators, Stanzel (1979) created a set of categories that can be used to analyse and classify different narratives in an objective way. We would suggest that insights gained by such an approach are limited, because most actual readers—of literary works and curriculum documents alike—are neither neutral nor objective, but are influenced by their personal and professional epistemology and bring to the table subjective agendas for reading, understanding, and utilising a given narrative. Since this research studies the form of curriculum documents with a focus on the narrators, we have not asked the intended reader, that is teachers, about their understanding. This gap will be bridged in a follow up study that will explore teachers' experiences while using curriculum documents, and will problematise the limitations of textual analysis of curriculum documents. The important role that the reader plays for meaning-making of (literary) texts has been discussed elsewhere (cf., Barthes, 1968; Iser, 1972).

For the purposes of the current research, we construct an ideal type *teacher reader* to complete Stanzel's typology. This construct assumes that our ideal type reader of curriculum

documents is the same for both the Swedish and the Scottish case. The assumed reader is a university educated teacher who reads the curriculum (or its derivative forms, for example, school produced teacher guides) as part of their everyday lesson planning, implementation and evaluation of teaching. Arguably, this ideal type teacher has learned to be critically aware when reading a curriculum document as part of their initial teacher education, but that he/she may not be particularly aware of the implications of the document's particular form. The fact that the research on that matter is limited implies that problematizing the form of curriculum documents is not common to teachers or in teacher education. The teacher reader may only be aware of the curriculum document as a framework to be followed. However, the implementation of the curriculum in terms of learning experiences requires the teacher to bring their professional expertise to bear on that curriculum in order to enact the curriculum within the classroom. Despite the teacher reader having critical awareness towards such curriculum documents, we also assume that he/she has a generally positive attitude towards such documents. It is reasonable to suppose that curriculum planners and policy makers have had similar readers in mind as our teacher reader when formulating the curriculum documents.

The *teacher reader* is not a part of the narrative. That the *teacher reader* is an appropriate description of the curriculum documents' likely reader is underpinned by the fact that a *teacher* actually appears as narrator in the Scottish *CfE Principles and Practices* document which will be presented in detail further on.

METHODOLOGY

The study combines a critical hermeneutic approach (Phillips & Brown, 1993) with (extended) narratological analysis (Stanzel, 1979). According to Phillips and Brown (1993, p. 1554), "the critical hermeneutic method […] decomposes interpretation into a dialectical process involving three 'moments': a moment of social-historical analysis […], a moment of formal analysis […], and a moment of interpretation-reinterpretation in which the formal analysis and social-historical analysis are brought together." This assumes that every text is composed of social-historical and formal aspects. Social-historical aspects include intentional, referential and contextual aspects. Texts are written by somebody with the intention to be read by somebody else and they must have a content that is comprehensible from the historical and social perspective through which it is produced. Furthermore, texts "[…] follow conventions of various kinds. The meaningfulness of text lies in the relation of the elements that make it up" (Phillips & Brown, 1993, p. 1553). This represents the conventional and structural that is formal, aspects of a text that are disclosed through *formal analysis*. Narratology covers both aspects of convention and structure.

For this study, we set aside the social-historical aspects of the development of curriculum documents, as others have considered these issues in some depth (citations). As we have described in the introduction, we assume curriculum documents to represent the programmatic level of curriculum making, connecting the institutional level of educational policy with the classroom level of curriculum making. Curriculum documents are mainly written on behalf of societies, represented by governments who delegate the task of curriculum formation to experts, to be received, understood and used by teachers in order to frame and steer their work. With some minor exceptions, the referential aspects, that is the content, of the curriculum documents are subject for a different study (Day, & Billmayer, 2018). Instead, this study focuses on the *formal analysis* of the curriculum documents with special emphasis on the appearing narrative voices utilising Stanzel's typology. The third step of interpreting-reinterpreting brings the findings of the narratological analysis together with the given assumptions about the intentional, contextual and referential aspects of the text.

In simple terms, the comparison and analysis of the curriculum documents went as follows: The relevant science curriculum documents relating to the Scottish Broad General Education (BGE) phase of education and the Swedish Compulsory phase were identified. For example, in the Scottish context all three documents relating to the Science curriculum were included and in the Swedish context Chapters 3.9, 3.10 and 3.11 (in translation) were included and shared between the authors. The translations were cross-checked with the Swedish version in order to check for accuracy and consistency. Language issues that would challenge the study's findings, are pointed out in the findings section where necessary. The science curriculum documents were then read to assess how they orient the science curricula. This was done comparatively, teasing out general similarities and differences in structural, textual and content organization.

At this point it is important to emphasize that aspects linked to Science can be found in different places in the Swedish curriculum documents. For example, in Chapter 1 “Fundamental values and tasks of the school” and Chapter 2 “Overall goals and guidelines of the Curriculum”, it is possible to make connections to Science as a subject and human endeavour in several places. However, we would argue that clear connections to the sciences and related school subjects are sparse. In Chapter 3 “Preschool Class”, one section of the Core Content is dedicated to “Nature, technology and society”. However, when we began work on this study, the Swedish Preschool Class for six-year-olds was not yet compulsory, which is why it was excluded from this study. Since then it has become compulsory, but after close consideration we decided not to extend the data analysis for this study. We have instead focused on those sections of the curriculum documents which make clear reference to science and its related disciplines/subjects, which meant a focus on the Swedish syllabi for Biology, Chemistry and Physics. For readers' convenience, we continue to use the term “curriculum documents” for the studied documents throughout this paper.

Since the introduction of the new curricula, education authorities in both Scotland and Sweden have continuously been publishing reading instructions, amendments and other clarifications as support to the practising teachers in their work with interpreting and enacting the curriculum (e.g., Education Scotland, 2017; Skolverket, 2021). It is likely that these additions—if they are used by the individual teacher—have an impact on how teachers understand the main curriculum documents. What this impact looks like in the individual case, as well as the commentary publications and their form in their own right, must be subject to future research.

The identification of the relevant documents was then followed by the identification and analysis of the narrative voices appearing in the two documents. A digital representation of Stanzel's typological circle was created in the CAQDA-software *Quirkos* enabling the researchers to analyse and classify the two curriculum texts sentence by sentence according to the *person, perspective* and *mode* dimensions. The analysis was done in several steps, starting with general questions as:

1. Which persons do appear in the documents?
2. Which names and pronouns are used?
3. Is there an outspoken narrator appearing?
4. Who or what do they refer to?
5. What do they know about the narrated world they are a part of?

This generated interpretations of the documents that enabled the authors to orient the two curriculum documents into the sextants of the circle.

The findings of the formal analysis were then used as a starting point for the step of interpretation-reinterpretation, setting the socio-historical aspects of the curriculum documents in relation to its form. Discrepancies between authors and actual receivers of the

document and the narrative voices in the documents facilitated the task of reinterpretation. Since curriculum documents ultimately are there for framing practice at classroom level, notions of the decision-making, professional teachers offered themselves as objects of discussion and further study. With the aid of the ideal type *teacher reader* as described above, we re-interpret the findings of our formal analysis. By re-interpreting, we are challenging the findings of the formal analysis of the curriculum to broaden the analysis and distil the findings into a form useful for future research with teachers using the curriculum documents as part of their daily work. Since this research focuses on the compulsory Science curriculum in Scotland and Sweden, our concluding re-interpretation is guided by the question of how the narrative voice influences the teacher reader in his/her process of reading, understanding and utilising the curriculum documents for their classroom work.

FINDINGS

The institutional level of curriculum making is represented in both countries' documents by a clear orientation statement with science curriculum documentation structured around content organisers such as Planet Earth, Forces, electricity and waves. At the programmatic level, structural similarities between the Scottish and Swedish science curricula in terms of breadth and range of content areas are identified. In addition, the level of prescription for content is similar in both countries. Both countries Science curricula specify what pupils need to know and be able to do at each stage of the learner's journey. The Scottish curriculum is set out in levels with level 0 relating to the early Years (Preschool—P1), Level 1- Lower Primary (P1 − P3), Level 2 (P4 − P7) Upper Primary, Level 3 Lower Secondary (S1/2) and Level 4 Middle Secondary (S3), whereas the Swedish Curriculum is set out in Stages/Years 1–3; 4–6; 7–9. The age range is similar in both countries, although children in Scotland typically start school one year before children in Sweden. The Swedish preschool has its own curriculum document.

The Swedish and Scottish Science curriculum documents differ when it comes to structural complexity. This is mirrored in the different lengths of the following sections on each country's curriculum.

The Swedish science curriculum

The Swedish Science curriculum's overall structure is quite simple and concise. It consists of three discrete sections on *Biology, Chemistry* and *Physics* that follow a similar format. Each consists of a short introduction about the role of science in general and the discipline in particular. This *preamble* as it will be called henceforth, is followed by three separate sections on: (1) *Aim*, (2) *Core content* and (3) *Knowledge requirements* at the end of year 3, 6, 9, including grading standards for years 6 and 9. The structural organisation of the Swedish Science curriculum thereby follows the tradition of academic disciplines in the field of science (Deng, 2011; Luke et al., 2012).

The preamble is similar for all three disciplines, all of them introduced with the statement that “The sciences have their origins in man's curiosity and the need to know more about ourselves and the surrounding world” (Skolverket, 2011, pp. 105, 120, 135). Two sentences follow, which are similar in structure, but coined for the discipline in question. In these short preambles a first personal pronoun, “ourselves”, appears. The rest of the curriculum does not contain any personal pronouns. The curriculum here is written from the third-person perspective without a visible narrator. The only people who appear in the curriculum are “pupils”, who are mentioned 316 times. Even though they do appear quite frequently, the

curriculum cannot be said to be written from a pupil's perspective. Also, they only appear in plural form, as a group. There are no references to individual pupils in the curriculum document. Pupils are *talked about*, but their voices are not represented. They are objects, not subjects in the narrative of the curriculum. This can be seen as they and their activities clearly are the—grammatical—objects, especially in the *Aim*s sections of the curriculum formulations like "Teaching should give pupils opportunities […] Teaching should create the conditions for pupils […] Teaching in biology/physics/chemistry should essentially give pupils the opportunities to develop their ability to […]" (Skolverket, 2011. pp. 105, 120, 135). It is important to mention that the original term, "ska", translated as "should", is not a conditional construction, but expresses future orientation. A more correct translation would be "shall". As these quotes show "teaching" is the recurring grammatical subject in the curriculum. So even though "teachers" are not mentioned once, their professional activity, *to teach*, is central to the curriculum. And it is teaching that comes first—as subjects—and the pupils and their development come second—as objects. It is the teaching that constructs the pupils and their development, not vice versa. This is furthermore underpinned by teaching, the teachers' activity, being mentioned 42 times, whilst learning, the pupils' activity, is not mentioned explicitly at all. This also sets the tone for the sections on knowledge requirements and grading standards, which do contain pupils as grammatical subjects, but whatever they must be capable of in order to get a certain grade, what has been acquired during a process in the past and is a result of *having been taught*. For example, this becomes apparent in the *knowledge requirements for acceptable knowledge at the end of year 3* in biology: "Based on clear instructions, pupils can carry out field studies and other types of simple studies dealing with nature and people, power and motion, and also water and air" (Skolverket, 2011, p. 109).

In this, the focus of the curriculum on *outcome* becomes visible. The *core content* is focused on fields of knowledge of different kinds. Only a few hints about possible activities in the classroom or teaching methods are evident in the curriculum document. The occurrence of "Simple scientific studies" (Skolverket, 2011, pp. 106, 121, 136), "Simple field studies and experiments. Planning, execution and evaluation" (Skolverket, 2011, p. 108) and "Documentation of studies using tables, diagrams, pictures and written reports" (Skolverket, 2011, pp. 109, 124, 139) only hint at the possibility of some kind of lab work being part of the science classroom. Other forms of teaching are not specified.

The Scottish science curriculum

The Scottish Science curriculum's structure is more complex than the Swedish one. It consists of two main documents: (1) *Principles and practices* (P&Ps) (Education Scotland, 2009b), and (2) *Experiences and outcomes* (E&Os) (Education Scotland, 2009a). The P&Ps document is introduced with a preamble about the role of science in society, which is similar to the Swedish curriculum, but substantially longer. The preamble is followed by nine subsections, most of them headlined by questions of different character and level of prescription: (1) *What are the main purposes of learning in the sciences?* (2) *What is the thinking behind the structure of the framework?* (3) W*hat learning and teaching approaches are useful in the sciences?* (4) *What skills are developed in the sciences?* (5) *Inquiry and investigative skills* (6) *Scientific analytical thinking skills* (7) *How can I plan* [note the use of the first person] *for progression in the skills of scientific investigations, inquiry and analytical thinking?* (8) *How does the science curriculum support development of the skills and attributes of scientifically literate citizens?* and (9) *What are broad features of assessment in sciences?* The second document, the E&Os, is divided into five topics, (1) *Planet Earth*, (2) *Forces, Electricity and Waves*, (3) *Biological systems*, (4) *Materials*, and (5) *Topical Science*. Unlike the Swedish

curriculum, the Scottish curriculum does not subdivide the content by individual discipline (Physics, Chemistry and Biology) replicating the traditions of the academic fields of science.

The Scottish Science curriculum contains a variety of narrative voices. Both in the P&Ps and the E&Os first person pronouns appear. In the preamble of the P&Ps, a "we" enters the scene which, according to the following text, both refers to humankind in general and Scots in particular. The curriculum is introduced stating that "Science is an important part of our heritage and we use its applications every day in our lives at work and at home" (Education Scotland, 2009b, p. 1). The following sentence hints at "our heritage" possibly referring to the specific Scottish heritage, since "Scotland has a long tradition of scientific discovery […]" (Education Scotland, 2009b, p. 1). The remaining preamble changes focus towards "children and young people", a third person construct. Similar to the Swedish curriculum, they seem mainly to be talked about, from the stance of the voice of humankind, and are not ascribed an active role. However, we accept that as a function of our focus on narrative voices we may be conflating two issues (1) in the way pupils appear syntactically in the documents and (2) expectations about their active involvement in learning (by conducting experiments; engaging in dialogue with each other and with their teacher; undertaking private study, making presentations, etc.)

The rest of the P&Ps is formulated in a dialogical way and will henceforth be called the *P&Ps question section*, because all but one rubric takes the form of a question to be answered by the text that follows on. The reader might ask *who the questioner is and who answers*? In the seventh question a personal reference appears, "How can *I* plan for progression in the skills of scientific investigations, inquiry and analytical thinking?" (Education Scotland, 2009b, p. 4), leading to the assumption that the other questions are posed by the same person and that the answers are given by somebody else (as part of their reflective practice?). In the answers, "teachers" are mentioned seven times—they are not mentioned anywhere else—leading to the conclusion that the questions are asked by a teacher. This means that the answers are given by somebody else, not a teacher, since otherwise the questions would be asked by *us* instead of *me*. Here, the authors or authorities behind the curriculum make a narrative appearance as the ones holding the answers, giving clarifications and explanations about the structure, content and logics of the curriculum. The answers in the P&Ps studied here are formulated in third person, but in *Curriculum for Excellence: Literacy/ Numeracy across learning—principles and practices* (Education Scotland, 2009c, 2009d), the answering voice is actually addressing the questioner as "you" (Education Scotland, 2009d, p. 2, 2009c, pp. 3, 4). For example, on page 2 of Education Scotland (2009c) states "*Where do I begin? You might begin by asking yourself to what extent you already provide literacy experiences for learners*". This further illustrates the dialogical character of the P&P sections in general.

The E&Os are presented in tables, organising the content of the curriculum around the above- mentioned topics that are specified into subtopics, and separated into different levels of schooling. Each topic is summarised in the leftmost column of the table. Here, it is described in broad terms what "learners" will experience and the net outcome of those experiences, for example "By exploring interactions and energy flow between plants and animals (including humans) learners develop their understanding of how species depend on one another and on the environment for survival" (Education Scotland, 2009a, p. 2). The Scottish curriculum does not use the term pupils, but *children and young people* are mentioned 22 and *learners* 23 times. The *learners* appear here as the active subjects, exploring, investigating, studying, developing etc., turning them into reflector-characters of the narrative. The more specific experiences and outcomes, sorted by school level, are also presented from the pupils' perspective. Here, the pupil appears as first-person narrator, experiencing manifold activities and contents related to science, resulting in development and learning. Some examples to illustrate these are (Table 1):

TABLE 1 Examples from E&Os. The tabular form is part of the original layout

Topic	Subtopic	Level	E&O
Forces, electricity and waves	Forces	Early	Through everyday experiences and play with a variety of toys and other objects, I can recognise simple types of forces and describe their effects SCN 0-07a[a]
Biological systems	Body systems and cells	Third	Using a microscope, I have developed my understanding of the structure and variety of cells and of their functions. By researching cell division, I can explain its role in growth and repair and can discuss how some cells can be used SCN 3-13a
Materials	Earth's Materials	Fourth	I have explored how different materials can be derived from crude oil and their uses. I can explain the importance of carbon compounds in our lives SCN 4-17a

Abbreviations: ENG, English; MNU, numeracy; SCN, Science.

[a]The codes provide a unique identification for each statement, purely for ease of reference.

As these examples show, the E&Os do not only describe what the expected outcomes for the learner should be, but are also rather specific in describing content and process of the learning. In that sense, the Scottish curriculum is restricted both in respect of outcome and process. In addition, we might suggest that there is also an issue of authenticity as we believe that it is highly unlikely that learners, in this case children and young people, would talk about their experiences in such a manner.

Narrative voices in the curricula

The systematic scrutiny using Stanzel's typology shows that in total four different narrative perspectives appear in the Swedish and Scottish Science curriculum documents (Figure 2). Both the Swedish and the Scottish curriculum documents are introduced by what has been called a *preamble* in the current study. These preambles contain a potent *we* representing humankind and society. Using a personal pronoun instead of a noun—that is "society" or "humankind"—supports the readers' sympathy and identification with the perspective and situation of the narrator (Stanzel, 1979, p. 244). In detail, the first person narrator resembles what Stanzel describes as the *"I" of the interior monologue*. This *I* does not outline any experiences and thoughts on purpose, as for example in a diary-style narration, "nor does it seek for an exchange with a dialogue partner, instead it unknowingly reveals the contents of its consciousness to the reader" (Stanzel, 1979, p. 286, our translation). In other words, the reader becomes a confidant who looks directly into the narrator's mind sees the world from their perspective.

In the case of the two curriculum documents, the *we* of the preambles reflects all humankind. This frames the following explanations, that is the rest of the curriculum, as something relevant and necessary for everybody. At the same time, it puts great pressure and responsibility on those who use the curriculum as guidelines for their actions, in other words, teachers in classrooms.

The *we* in the preamble of the Scottish curriculum can furthermore stand specifically for Scots by emphasising that "Scotland has a long tradition of scientific discovery […]" (Education Scotland, 2009b, p. 1). Thus, a nationalistic dimension is added to the school subject of Science, challenging our introductory claim that Science is particularly suitable for international comparisons, because of its commonly accepted universality of the content.

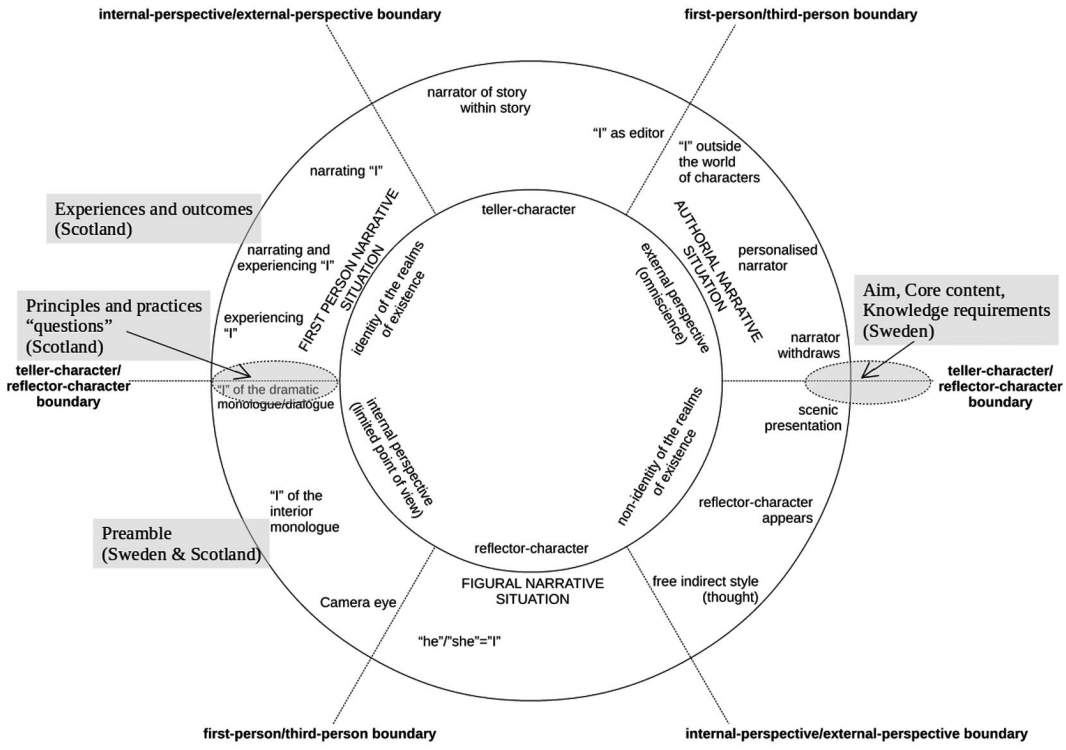

FIGURE 2 The narrative voices of the Scottish and Swedish curriculum documents in the typological circle

Besides the *we* of the preamble, three further, different voices appear in the Scottish curriculum: the *I* of the P&Ps questions section, the replier of the P&Ps question sections and the *I* of the E&Os. The characterisation of the voices appearing in the *P&Ps question section* is the most difficult one, because there are two possible ways to typify the voices in this section, adding suspense to the question, to whom do these voices belong?

At first glance the question-answer-scheme resembles the dialogic form of a *scenic presentation*, leading thoughts towards drama and theatre. On the one hand, there is an asking voice, representing a teacher, who wants—or needs—to learn about Science as a school subject, the thoughts behind the curriculum or "what learning and teaching approaches are useful in the sciences?" (Education Scotland, 2009b, p. 2). On the other hand, there is an answering dialogue partner, representing the voice of the authors behind the curriculum, because they are the likely ones to know what "the thinking behind the structure of the framework" (Education Scotland, 2009b, p. 1) was. The fact that it is the voice of the teacher that initiates the dialogue and asks the first question gives the impression that the curriculum here has a teachers' perspective and that the content is especially relevant for teachers.

Upon closer scrutiny of the E&Os our analysis challenges this reading. Using the appearing *I* as a starting point, and not the dialogic appearance of the section, places it on the other side of the typological circle and characterises it as a *dramatic monologue*. "In the dramatic monologue a monologizing I does speak to the You, but this You remains an unspecified variable, that the reader only can approximate or identify indirectly" (Stanzel, 1979, p. 285, our translation). Even though the question-answer-scheme might at first glance appear as dialogue, there are signs that P&Ps actually are monologue, where the questioner and the respondent actually speak with the same voice—and it is plausible to assume that it is not the voice of a teacher at all, but that it is actually the voice of the authors all the time, only mimicking the teachers' voice in order to hide their intentions. These intentions are not clear.

Whichever of the two interpretations one chooses, this voice is one of somebody who does not know or is very uncertain how to read a curriculum, and even about what science is about or how it should be taught. The teacher is discursively positioned as someone in need of guidance rather than an educated and experienced professional teacher with a degree of autonomy. The dramatic monologue is one of the most limited narrative perspectives. The second part of the Scottish curriculum, the E&Os, is—in contrast to the P&Ps—narratologically quite simple to typify from. The E&Os are presented by a first-person narrator, a *narrating and experiencing I*, representing an individual pupil's voice, who has undergone the enacted curriculum, telling about what s/he has done and what s/he has learned. The *experiences* are reported in present perfect—or related formulations referring to the past—and the outcomes in simple present, for example "I have propagated and grown plants using a variety of different methods [i.e., experience; present perfect]. I can compare these methods and develop my understanding of their commercial use [i.e., outcome; simple present]" (Education Scotland, 2009a, p. 2).

The *Aims, Core contents* and *Knowledge requirements* of the Swedish curriculum are told from a completely different perspective, actually on the opposite side of the typological circle than the preambles and the voices found in the Scottish curriculum. The narrative of the Swedish curriculum can only be partially described using Stanzel's typology, because any kind of narrator has withdrawn at the same time as the text does not yet resemble a scenic presentation of—for example—two or more characters engaging in dialogue (Stanzel, 1979, p. 243). Instead, the Swedish curriculum resembles a theatre play text—which usually consists of dialogue and stage directions—but without the dialogue with only stage directions remaining. The settings for an improvisation might be a suitable metaphor for the kind of text the Swedish Science curriculum is. In improvisation, the actors collect rudimentary suggestions for setting, and content for a narrative from the audience, which they then transform into a complete story. The attraction of this kind of theatre is that neither the audience, nor the actors, are able to foresee the course of the play that will unfold on a particular night.

DISCUSSION

The Scottish and Swedish Science curricula differ in both form and narrative voices. Using the terminology suggested by Luke et al. (2012), *disciplinary experts* seem to have won over *educational experts* in the construction of the Swedish curriculum, which is organized around the traditional science disciplines of biology, chemistry and physics (as confirmed by, e.g., Adolfsson, 2018). The Scottish curriculum, in contrast, is organised around capacities and topics, with only hints towards the traditional disciplines. In this regard, the CfE can be positioned within the *curriculum*-tradition, whereas the Swedish curriculum orients towards a *Lehrplan*-tradition as suggested by Hansén and Sjöberg (2011). Even though the prominent voice of the pupil in the E&Os, underlines the characterisation of the CfE as *curriculum*, this is contradicted by the fact that the E&Os are sorted by consecutive stages, related to the learners' age, which is also true for Sweden and a *Lehrplan*. In addition, it could be argued that CfE is connected to a centralised school system whilst the Swedish school system has been rather decentralised for approximately 25 years, although Wahlström and Sundberg (2017) have found stronger steering from national agencies during implementation of Lgr 11. In conclusion, both the Scottish and Swedish curriculum documents appear to be complex characters. These ambiguities continue when returning to the central object of the study, the narrative perspectives.

The Scottish and Swedish curricula are similar in the way they are introduced by first person narrators in what we have called the preambles. A personal narrator has by definition a limited perspective, and mediates the information. In the case of the two countries' Science

curricula, a *we*, that does not explicitly reveal its identity, asserts the necessity of Science as such and school subject in particular to the reader—the teacher. This first-person narrator of the *interior monologue* (Figure 2) is like a whisper of the conscience, taking the reader into its intimate confidence and making clear that something crucially important will follow. This bestows the following aims, contents, experiences and outcomes with an aura of uttermost relevance and necessity, and thereby puts great responsibility on those who use the curricula as guidelines for their teaching. As we have seen, the *we* in CfE can be read as referring to *Scots*, which challenges our claim about Science as subject being free from nationalistic characteristics. Actually, the Scottish Science curriculum refers several times to the specific national, Scottish aspects of Science and scientific innovation. As Hizli Alkan and Priestley (2018) have stated, CfE documents are notable and stand out for their structure.

The Scottish Curriculum continues with narrator voices with limited perspectives. The content is mediated towards the teacher using narrator voices representing the curriculum author(s) and the pupil. The voice of the teacher appears only to ask questions, in that sense the teacher appears as the receiver *of* the text *in* the text. In the Swedish curriculum, the narrator of the preamble withdraws completely in the rest of the curriculum. It seems as if the Swedish curriculum is a message, without the voice of a narrator becoming audible, although this contradicts the statement from the very beginning of this article. This means that we have one curriculum document that contains multiple narrators and a *reader-character* (to paraphrase Stanzel), and one curriculum document with hardly any narrator voice at all.

The withdrawal of the narrator in the Swedish science curriculum, leaving only "stage directions", demands that the teacher come forward to enact the Science curriculum in a comprehensive way within the classroom for pupils. The Science curriculum's form affords teachers with decision rights concerning specific content and teaching methods, and opens the potential for a wide-ranging experience of agency. This requires substantial professional knowledge, understanding and skills in Science from the teacher, which leads to the question if everybody is able to make use of these potential decision rights, or whether they would rather have some more de*script*ion and *direction*. Bergh and Wahlström's (2018) findings suggest that this can be experienced in a variety of ways by different teachers, but whether this ambiguity applies in relation to the Scottish and Swedish Science curricula in so far as this can be derived from the particular narrative form of the documents, is open question and ought to be the subject of future research.

While the Swedish Science curriculum is neither written with a teacher's voice, nor does it mention *the teacher* at all, in its Scottish counterpart, the teacher's voice does appear, but only in the subordinate role of a questioner. The voice of the teacher in the Scottish Science curriculum resembles someone in need of help and guidance and not somebody who is capable of making autonomous, professional decisions. Instead, the experiences of a pupil—in singular—told from an individual, first- person perspective is used to present what is supposed to be the content, method and outcome of the teaching. This represents a narrator with a *limited* view or understanding of the world of which they are a part. This advances a concept of knowledge as individualistic, relativistic and limited. Under the premises of the above-discussed *curriculum*-tradition, the strong focus on the pupil is only logical, but it is open to debate if such a limited, individualistic view actually is a suitable starting point for equal and sustainable teaching and learning activities aimed at groups of pupils in classrooms.

The Scottish teacher has to do a lot of translation and transmission work (Wallace & Priestley, 2017), having only ready-made tales about experiences from a pupil perspective (see Table 1). While arguably the E&Os are prescriptive, it could also be suggested that it is difficult to derive from the curricular narrative what kind of teaching is required to successfully facilitate some of the Scottish experiences and outcomes. Indeed, many of the Scottish Science E&Os have been criticised as being too vague (Day & Bryce, 2013; Priestley, 2010).

We suggest that this vagueness is problematic since there is no causal relation between the experiences and the outcomes. Hizli Alkan and Priestley (2018) claim that CfE in general offers teachers room to manoeuvre, but our analysis shows that the documents do not afford the teacher an active role in the Scottish Science curriculum. We would argue that on the one hand, this might lead to more hesitant and constrained decision-making by teachers and a reduction in professional autonomy, while on the other, it requires them to have the subject matter knowledge and the pedagogical content knowledge to translate the E&Os into meaningful learning activities. This conclusion, however, is challenged by Priestley and Minty (2013), who on the one hand confirm that teachers have experienced uncertainty implementing the CfE reforms, but on the other find the reasons for that in a "perceived vagueness and lack of clarity around the new curriculum" (Priestley & Minty, 2013, p. 46). We suggest that the vagueness within the Scottish Science experiences and outcomes could potentially provide the space for professional decision-making to occur.

However, this runs the risk that if the teacher lacks experience or expertise in terms of the subject matter required to translate the Science E&Os into suitable classroom activities, then the learning that emerges from the experience may be lacking in terms of breadth and depth. Incidentally, both breadth and depth are two of the key design characteristics of the CfE reforms to the Science curriculum. It is possible to argue that these points could be addressed as part of teachers' initial teacher education. It is important to note that within the Scottish context, the majority of the science E&Os are designed to be delivered by generalist primary teachers who often lack the subject and pedagogical knowledge required to translate the E&Os into adequate classroom experiences, as well as the confidence to enact effective Science lessons (Day, & Killen, 2018; Osborne et al., 2003). While we accept that some primary teachers have a good grounding in the sciences, possibly from their undergraduate background, it is also true that the majority do not and often fill the gaps with obsolete traditions and personal experiences based on their own educational experience. The fact that the Scottish Science E&Os are formulated from the perspective of the pupil as opposed to the teacher, as is the case with the Swedish curriculum, adds a level of complexity. Whether or not this complexity is perceived as an obstacle or not by teachers is a subject for future investigation, since the scope of the current study is deliberately limited to the published curriculum documents. We suggest that the particular form of curriculum documents might impact upon how teachers interpret that curriculum and how the relation between teacher, pupil, content, method etc. in the classroom develops. The extent of that is likely to differ from teacher to teacher and time to time depending on context. Other factors such as teacher education, teachers' personal epistemology and collegial influences may mitigate the impact of the curriculum documents' particular form. This cannot be answered by this study, but must be the subject for future research.

What can be discussed at this stage, is whether the narrative perspectives in the two countries' science curriculum documents is a barrier or an enabler for the "ideal" typical *teacher reader*. We have so far analysed and discussed the narratology of the curricula from an undefined, neutral reader's perspective, the perspective of the literary critic. But what happens if we reassess our findings from the perspective of the *teacher reader* who reads the curriculum with the clear purpose of planning, before conducting and then evaluating their classroom work. The teacher reader supposedly reads the document from a personal perspective, as it is their work that the curriculum document is supposed to direct. The direction of the *teacher reader's* use of the document is either prospective (the didactical planning of the lesson) or retrospective (evaluating the lesson and its outcome, e.g., the pupils' learning). To conclude this study, we therefore look at how the specific form and narrative perspectives of the two curriculum documents in question influence these two endeavours.

Although the teacher is not particularly mentioned within the Swedish curriculum, it is written from the perspective of *teaching*. Pupils are the object of the teachers' action (teaching),

as well as the (grammatical) object in the curriculum. This means that the orientation of the curriculum's narrative is the same as teacher reader's, looking from the teacher's position towards the pupils, into the classroom. The Swedish curriculum might not be pupil-centred, as we have claimed above, but reading it from a teacher's perspective, with the purpose of planning a lesson, the pupil becomes the focal point of the teacher and the learning process. The use of future tense—although this does not become apparent in the English translation—in the *Aim* and *Core content* sections facilitates the document's usability for planning. The fact that the teaching activities are not specified in detail makes it clear to the teacher reader that s/he will have to draw on their professional experience and use other resources of knowledge to enact the curriculum.

In the Scottish P&Ps document the questions section must be disconcerting for the teacher reader, since it gestures towards the complexity—or novelty—of the document and the endeavour of teaching Science. Why else would it be necessary to provide an educated, professional reader with such an explanation? Here, the teacher (reader) actually appears as a character in the narrative, as the questioner, who is not constructed as very knowledgeable by the authors.

For planning their classroom activities, the Scottish teacher reader is likely to focus on the experiences, described in the *E&Os*. It is during lessons, when pupils are supposed to have these experiences. In contrast to the Swedish curriculum, the Scottish experiences and outcomes are formulated in the past tense, the actual opposite temporal direction of the prospective planning process. The teacher must therefore flip from the past to future, when using the curriculum for planning purposes. Since the experiences are written from a subjective, pupil/learning perspective, the teacher must translate them into a teacher/teaching perspective. The level of specification of the described experiences varies, but the subjective perspective does in general narrow the teacher's room to manoeuvre. Since it is the pupil's experience that is central, the teaching comes second. Taken from this perspective, the teacher's task becomes more complex, when you factor into the equation that 20 pupils in a class must have the experience demanded by the curriculum and reach the expected outcome.

When it comes to evaluating lessons and assessing their outcome, for example the pupils' learning, the Swedish curriculum contains a section entitled *Knowledge requirements* which clearly sets out what pupils should know as a consequence of teaching whereas the outcomes aspects of the Scottish *E&Os* suggest what a pupil should be able to do/know as a result of teaching. These parts are quite similar, formulated in the present and the pupil appears as the subject in the Swedish document and as first-person narrator in the Scottish.

Although pupils are the subject within the Swedish *Knowledge requirements*, read from a teacher perspective, the curriculum describes what becomes visible of the pupils' learning and development. Congruence with teachers' observation of the pupils' work and utterances in order to assess the pupils' skills and knowledge, the curriculum describes how they are likely to become visible.

However, in the Scottish E&Os, the teacher must perform a similar translation of the outcome as for the experiences. Since the outcomes are directly connected to the experiences, formulated from the subjective pupil perspective, what is evaluated is actually not necessarily the pupils' skills and knowledge but whether pupils think that the experiences—or more specifically the teaching—has provided them with the necessary means of learning.

We suggest that the difference between the Swedish and Scottish curriculum formulation of assessment relates to the difference between an observation and an interview study. They can both study the same phenomenon, but with very different perspectives and outcomes. Which one is the better to use is dependent on the purpose and the questions that shall be answered. This must be made clear in the very beginning, at the point of formulation. As we have shown, the Swedish curriculum's formulation is coherent with the teacher's

perspective on curriculum usage, whereas the Scottish document demands several steps of translation by the teacher to arrive at the same point.

It is clear that there is a difference in interpretation between the Scottish and Swedish curriculum documents narrative form, whether they are made from a neutral reader's perspective (Stanzel) or from a purpose driven *teacher reader* perspective. For example, the Scottish E&O's are written in a pupil-centred manner compared to the Swedish document, which is written in a teaching/teacher-centred way. From the teacher reader perspective, the Scottish documents have the teacher under observation, while the Swedish document focuses on the pupil. At the institutional level, it might be desirable to emphasise the pupil at the centre of the learning experience, but from a classroom/teaching perspective, it can be confusing.

What this study has suggested is that while the curriculum is in development, curriculum designers need to pay specific attention to the narrative form of the curriculum document as this will impact on how it is used by teachers in regard to their interpretation of what the intended curriculum ought to look and feel like in the classroom in terms of pedagogy and how that learning will be assessed. Also, given that most curriculum documents have many authors, we suggest that attention to the narrative form will allow the designers to streamline the narrative in a coherent way by keeping the eventual readers, the teachers, in mind. Furthermore, they also ought to reflect on how the curriculum will be used to support teacher development (both in Initial teacher education and continuing professional development). Teachers and teacher educators must become more aware of how the form, as well as the content of curriculum documents influences teachers' thinking when using curriculum documents.

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CONFLICT OF INTERESTS

No financial interests or benefits have arisen from the direct applications of your research.

ETHICS STATEMENT

No ethical approval required since the data is freely available in the public domain.

DATA AVAILABILITY STATEMENT

The data used in this study are freely available online. For Sweden at Skolverket (www.skolverket.se) and for Scotland at Education Scotland (www.education.gov.scot).

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