Evidential Determiners in ʔayʔaǰuθəm[*]

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Abstract: Based on novel fieldwork data, we propose a re-analysis of the determiner system of ʔayʔaǰuθəm (a.k.a. Comox-Sliammon; Central Salish). Contrary to previous descriptions by Davis (1973), Watanabe (2003), and Huijsmans et al. (2018), we argue that determiners in ʔayʔaǰuθəm encode evidentiality (contrasting 'current direct evidence', 'previous direct evidence', and 'evidence-neutral' determiners). To account for this pattern, we argue that the determiners encode relations between situations, following work by Speas (2010) and Kalsang et al. (2013). Thus, this paper not only provides (further) evidence that evidential notions can be found in the nominal domain, but also offers an analysis that could potentially be expanded to other Salish languages.

Keywords: ʔayʔaǰuθəm (Comox-Sliammon), determiners, situations, evidentiality, semantics

1 Introduction

In this paper, we examine the determiner system of ʔayʔaǰuθəm (a.k.a. Comox-Sliammon; ISO 639-3: coo), the northernmost of the Central Salish languages. Based on novel fieldwork data, we argue that the determiners in this language encode evidentiality. More specifically, the determiner paradigm distinguishes whether the speaker has current direct evidence for the referent or previous direct evidence for the referent; an evidence-neutral determiner completes the inventory. In addition, gender and number also play a role for a subset of the determiners.

We analyze the evidentiality encoded by these determiners as expressing relations between situations (following Speas 2010 and Kalsang et al. 2013). More specifically, we argue that the determiners encode relations between the utterance situation and the situation in which the speaker obtains evidence for the existence of a referent. The speaker has current direct evidence for the referent when the referent is present in the same situation in which the speaker is making the utterance. The speaker has previous direct evidence when the referent was present in a previous situation that the speaker witnessed, but is no longer present at the time of utterance. The evidence-neutral determiner is used when the speaker has either indirect or no evidence for the existence of the referent.

Throughout the Salish language family, determiners are often described as encoding 'visibility' vs. 'invisibility' or 'presence' vs. 'absence'. The evidential analysis proposed here for ʔayʔaǰuθəm captures both these notions. Given the frequency with which these terms are used, we

think it is likely that determiners in other Salish languages could also be analyzed in terms of evidential distinctions, and indeed this has been previously proposed for St'át'imcets (Gutiérrez & Matthewson 2012, Gambarage & Matthewson 2019). We also believe that demonstratives in ʔayʔaǰuθəm (and other Salish languages) encode similar evidential notions, but these are beyond the scope of the present paper.

The remainder of this paper is organized as follows. Section 2 presents previous analyses of ʔayʔaǰuθəm determiners and discusses why these are not adequate to capture all uses of the determiners. Section 3 discusses the contribution of each of the determiners, while Section 4 provides our analysis. Finally, Section 5 briefly discusses the cross-Salish implications of the analysis.

2   Previous Descriptions

Not much has been written about determiners in ʔayʔaǰuθəm, apart from brief descriptions by Davis (1973), Harris (1981), Watanabe (2003), Huijsmans et al. (2018), and Davis (this volume).[1] The following paragraphs provide brief summaries of the various accounts.

In a footnote, Davis (1973:10) presents a paradigm in which the determiners distinguish 'visibility', 'nonvisibility', and 'remoteness', as well as minor vs. major 'importance'.[2]

Table 1: The ʔayʔaǰuθəm determiner paradigm in Davis (1973)

	Visible	**Nonvisible**	**Remote**
Minor Importance	ɬ	ɬ	—
Major Importance	tə	k^w	šə

For the Island dialect of the language, Harris (1981:92) describes *tə* as present, *kʷə* as 'non-present', and *šə* as 'former'; he does not find the *ɬ* determiner, though he reports it in material from Boas.[3]

Table 2: The ʔayʔaǰuθəm determiner paradigm in Harris (1981)

Present	**Non-present**	**Former**
tə	k^w	šə

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[1] Davis (this volume) has examples of the *tə* determiner preceding proper names and notes that this was a feature of earlier stages of the language. We have not observed this in the speech of present-day speakers and have been unable to replicate this with even the eldest current speaker. For speakers today, it seems that determiners cannot precede proper names.

[2] These terms are not explicitly defined; this is the case for the terms used in the previous descriptive literature on the determiners more generally.

[3] In writing his dissertation, Harris referred to unpublished notes from Boas on Comox — lists of words, lists of phrases, and some narratives — held at the Smithsonian Institution and American Philosophical Library (see Harris 1981:5–6 for a complete list). He does not specify which materials in particular were referenced for the determiners.

Watanabe (2003:79) describes the ɁayɁaǰuθəm determiners as encoding distinctions of referentiality, but he says the details of the system "still need to be worked out" (fn. 77).

Table 3: The ɁayɁaǰuθəm determiner paradigm in Watanabe (2003)

	Referential	**Nonreferential**	**Remote**
Feminine	*ɬə*	*kʷə*	*šə*
Neutral	*tə*	*kʷə*	*šə*

Our consultants often characterize use of the determiners in terms of visibility, and in previous work, Huijsmans et al. (2018), like Davis (1973), analyzed the system along these lines, as shown in Table 4. In addition, Huijsmans et al. noted an additional distinction between *ɬə* and *ɬ*, which is not found in previous work.

Table 4: The ɁayɁaǰuθəm determiner paradigm in Huijsmans et al. (2018)

		Deictic		**Nondeictic**
		Visible	**Nonvisible**	
Feminine	**SG**	*ɬə*	*ɬ*	*kʷə*
	PL	*tə*	*šə*	*kʷə*
Non-Feminine	**SG**	*tə*	*šə*	*kʷə*
	PL	*tə*	*šə*	*kʷə*

However, none of these previous analyses are able to explain all the data. For instance, a visibility-based account runs into problems because the 'visible' determiner *tə* is sometimes used for referents that cannot be seen, as in (1a).[4] Similarly, characterizing *šə* as 'former' or 'remote' does not capture uses of *šə* for referents that are present but non-visible (1b). Referentiality also does not adequately predict the distribution of the determiners, since referential DPs do not

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[4] All un-cited data come from fieldwork by the first two authors. The first line of each example is given in the orthography, the second line is a phonemic representation showing morpheme breaks, the third line provides a gloss, and the fourth line gives the translation. Infelicitous examples are marked with a hashtag (#), and marginal uses are marked with a superscripted question mark ($^?$). The abbreviations used in this paper follow the Leipzig Glossing Rules, with the following additions: ACT 'active intransitivizer', CDE 'current direct evidence', CLD 'clausal demonstrative', CTR 'control transitivizer', DEIC 'deictic', DIM 'diminutive', EXIS 'assertion of existence', INFER 'inferential', INT 'intensifier', NCTR 'non-control transitive', NTS = 'non-topical subject', PDE 'previous direct evidence', RPT 'reportative', SENS.NON.VIS 'sensory non-visual' (sensory evidence which cannot include direct visual evidence), STAT 'stative'. Affixes are marked by a hyphen '-', clitics by an equal sign '=', infixes by angle brackets '< >', and fused morphemes that cannot be segmented by a '+'.

always allow *tə* and *łə*; in both (1c–d), the DPs refer to an individual in the actual world, but the *tə* and *łə* determiners are dispreferred.

(1) a. *Context: It's a hot summer day.*
    łaχsxʷčɛn   {**tə** / #šɛ / #kʷ} k̓ʷas.
    łəx̣-sxʷ=čan   {**tə** / #šə / #kʷ}=k̓ʷas
    bad-CAUS=1SG.SBJ {**CDE.DET** / PDE.DET / DET}=heat
    'I don't like this heat.'

    b. *Context: A child comes over and wants to play with the cat, but it is behind your couch.*
    kʷayɩmot   **šɛ** mɛmaw̓.
    kʷay-i-mut   **šə**=mimaw̓
    hide-TR-REFL   **PDE.DET**=cat
    'The cat is hiding.'   (Huijsmans et al. 2018:335)

    c. *Context: I'm at your house, telling you about the bear encounter I had this morning.*
    nɛʔoł   {#tə / **šɛ** / ʔkʷ} mɛχał
    niʔ-uł   {#tə / **šə** / ʔkʷ}=mix̣ał
    be.there-PST   {CDE.DET / **PDE.DET** / DET}=black.bear
        ʔə šɛt^θ ʔasq̓ič   skʷiǰoł.
        ʔə=šə=ət^θ=ʔasq̓iyč   skʷiǰuł
        OBL=PDE.DET=1SG.POSS=outside   morning
    'There was a bear in my yard this morning.'

    d. xʷač   k̓ʷʊnʊxʷanoł
    xʷaʔ=č   k̓ʷən-əxʷ-an-ʔuł
    NEG=1SG.SBJ   see-NCTR=1SG.SBJV-PST
        {#łət^θ / #łət^θ / **kʷʊt^θ** /
        {#łə=ət^θ / #ł=ət^θ / **kʷ**=ət^θ /
        {F.SG.CDE.DET=1SG.POSS / F.SG.PDE.DET=1SG.POSS / **DET**=1SG.POSS /
            #šɛt^θ} čɛčɛmɛqʷoł.
            #šə=ət^θ}=čačamiqʷ-ʔuł
            PDE.DET=1SG.POSS}=great.grandmother-PST
    'I never saw my late great-grandmother.'

Our goal in this paper is to provide a semantic analysis of the ʔayʔaǰuθəm determiner system. This will include establishing what semantic distinctions the system encodes, and how the system is organized paradigmatically.

As previewed in the introduction, our main claim is that ʔayʔaǰuθəm determiners encode **evidentiality**. We will argue that what has previously been analyzed as 'visibility' in this determiner system is better characterized as direct evidence (usually, but not always, visual) in the utterance situation. What has been called 'remoteness' or 'former' is actually direct evidence prior to the utterance situation, and what has been called 'nonreferentiality' or 'non-deictic' is instead the absence of direct evidence.

3 Determiners in ʔayʔaǰuθəm encode evidentiality

Most discussions of evidentiality focus on sentence-level evidential elements. Roughly speaking, these indicate the speaker's source of information for their assertion; see Murray (in press) for a recent overview and references. Two simple examples are given in (2) and (3), from the Northern Interior Salish language St'át'imcets (a.k.a. Lillooet). The sentential evidential *k'a* in (2) encodes that the speaker has made an inference from indirect evidence of any kind; *lákw7a* in (3) can only be used when the speaker has *sensory* indirect evidence of the eventuality.

(2) *Context: You are a teacher and you come into your classroom and find a nasty picture of you drawn on the blackboard. You know that Sylvia likes to draw that kind of picture.*
Nilh**ˌk'a**   núkun'   k Sylvia   ku metscál   ti píktsha   láku7.
níɬ=**ka**   núkʷuṅ   k=Sylvia   kʷu=məč-xál   ti=píkčh=a   lákʷuʔ
FOC=**INFER**   again   DET=Sylvia   DET=write-ACT   DET=picture=EXIS   DEIC
'It must have been Sylvia who drew the picture.'   (Matthewson 2012:89)

(3) *Context: You are a teacher and you come into your classroom and find a nasty picture of you drawn on the blackboard. You look around and you see that only one child has got chalk dust on her hands, Sylvia.*
Nilh **lákw7a**   sSylvia   ku xílhtal'i.
niɬ **lákʷʔa**   š=Sylvia   kʷu=x̣íɬ-taḷi
FOC **SENS.NON.VIS**   NMLZ=Sylvia   DET=do(CAUS)-NTS
'Sylvia must have done it.'   (Matthewson 2012:93)

   While most studies of evidentiality discuss sentence-level elements which encode the speaker's source of evidence for a **proposition**, here we focus on evidential determiners which encode the speaker's source of evidence for the existence of a **nominal referent**. The ʔayʔaǰuθəm determiners also encode information about the **time** at which the speaker has evidence for the existence of the referent.

3.1 Direct evidence determiners

We define **direct evidence** for the existence of a referent as evidence that entails the existence of the referent without further inference (cf. Speas 2010).[5] We argue that both *tə* and *ɬə* mark that the speaker has direct evidence for the existence of the referent at the time of utterance (i.e., current direct evidence, CDE). This is shown in (4) and (5). In (4), the speaker is witnessing (seeing) the bear at the utterance time, and the only appropriate determiner is *tə*. In (5), the speaker again has visual direct evidence of the woman at the utterance time, and the preferred determiner is the feminine CDE determiner *ɬə*; the general CDE determiner *tə* is also marginally possible in this context.

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[5] To illustrate this, if you wake up one morning and the smell of coffee is drifting upstairs from the kitchen, you only have direct evidence for the smell, but not the coffee; for the coffee itself, you have indirect evidence, from which you gratefully infer its existence.

(4) *Context: You look out the window and there's a bear in your yard.*
 nɛ   {**tə** / #šɛ / #kʷ} mɛχaɬ.
niʔ   {**tə** / #šə / #kʷ}=miχaɬ
be.there {**CDE.DET** / PDE.DET / DET}=black.bear
'There's a bear.'   [CURRENT DIRECT EVIDENCE]

(5) *Context: There's a woman on the beach and you see her now.⁶*
nɛ   {**ɬə** / #ɬ / ˀtə / #kʷ} saɬtxʷ   ʔə tə q̓ʷɛt.
niʔ   {**ɬə** / #ɬ / ˀtə / #kʷ}=saɬtxʷ   ʔə=tə=q̓ʷit
be.there {**F.SG.CDE.DET** / F.SG.PDE.DET / CDE.DET}=woman OBL=CDE.DET=beach
'There's a woman on the beach.'   [CURRENT DIRECT EVIDENCE]

The determiners *šə* and *ɬ*, in contrast, indicate that the speaker had direct evidence for the existence of the referent in a previous situation, but no longer does at the time of utterance (i.e., previous direct evidence, PDE). This is shown in (6) and (7). Example (6), repeated from (1c) above, contrasts minimally with (4): this time, the speaker's visual evidence for the existence of the bear was prior to the utterance time, and *tə* is no longer acceptable. Instead, the PDE determiner *šə* is used. Example (7) involves a feminine referent which was witnessed prior to the utterance time, triggering the use of the feminine PDE determiner *ɬ*; the general PDE determiner *šə* is also marginally possible.

(6) *Context: I'm at your house, telling you about the bear encounter I had this morning.*
nɛʔoɬ   {#tə / **šɛ** / ˀkʷ} mɛχaɬ   ʔə šɛt̓ ʔasq̓ič
niʔ-uɬ   {#tə / **šə** / ˀkʷ}=miχaɬ   ʔə=šə=ət̓=ʔasq̓iyč
be.there-PST {CDE.DET / **PDE.DET** / DET}=black.bear OBL=PDE.DET=1SG.POSS=outside
        skʷiǰoɬ.
        skʷiǰuɬ
        morning
'There was a bear in my yard this morning.'   [PREVIOUS DIRECT EVIDENCE]

(7) *Context: You saw a woman on the beach earlier (but not now).*
nɛʔoɬ   {#ɬə / **ɬ** / ˀšɛ / #kʷ} saɬtxʷ
niʔ-uɬ   {#ɬə / **ɬ** / ˀšə / #kʷ}=saɬtxʷ
be.there-PST {F.SG.CDE.DET / **F.SG.PDE.DET** / PDE.DET / DET}=woman
        ʔə tə q̓ʷɛt   skʷiǰoɬ.
        ʔə=tə=q̓ʷit   skʷiǰuɬ
        OBL=CDE.DET=beach   morning
'There was a woman on the beach this morning.'   [PREVIOUS DIRECT EVIDENCE]

While speakers usually rely on visual evidence to confirm the existence of a referent, as in (4) to (7), there are some referents that cannot be accessed visually and consequently are directly perceived through other senses. For example, internal organs or heat can only be perceived

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⁶ There is some variability in whether *ɬ* is judged infelicitous in examples like (5). We believe this is due to the fact that the CDE determiner *ɬə* can reduce to *ɬ* in connected speech, neutralizing the surface contrast between the two. Judgements are more consistent in the opposite direction: *ɬə* is always judged infelicitous when the speaker has PDE (7), since the surface contrast is never neutralized in this direction.

somatically (8–9), taste necessarily relies on gustatory evidence (10), and smell relies on olfactory evidence (11). In all of these cases, the evidence is perceived at the time of speech, and so the CDE determiner *tə* is the acceptable choice.

(8) *Context: Calling attention to a medical condition.*
χəčθot   {**tət⁰** / #šɛt⁰ / **kʷʊt⁰**} ƛ̓ukʷɛnəs.[7]
χəč-θut   {**tə=ət⁰** / #šə=ət⁰ / **kʷ=ət⁰**}=ƛ̓əkʷinas
get.sharp.pain-REFL   { **CDE.DET**=1SG.POSS / PDE.DET=1SG.POSS / **DET**=1SG.POSS }=heart
'I have a stabbing pain in my heart.'   [CURRENT DIRECT EVIDENCE: SOMATIC]

(9) *Context: It's a hot summer day.*
łaχsxʷčɛn   {tə / #šɛ / #kʷ} k̓ʷas.
łəχ-sxʷ=čan   {**tə** / #šə / #kʷ}=k̓ʷas
bad-CAUS=1SG.SBJ   {**CDE.DET** / PDE.DET / DET}=heat
'I don't like this heat.'   [CURRENT DIRECT EVIDENCE: SOMATIC]

(10) *Context: I taste the cake and I don't like it.*
łaχsxʷčɛn   {**tə** / #šɛ / ˀkʷ} t̓aʔanəns.
łəχ-sxʷ=čan   {**tə** / #šə / ˀkʷ}=t̓aʔ-anən-s
bad-CAUS=1SG.SBJ   {**CDE.DET** / PDE.DET / DET}=taste-NMLZ-3POSS
'I don't like the taste of it.'   [CURRENT DIRECT EVIDENCE: GUSTATORY]

(11) *Context: Daniel brought in some cedar.*
hɛhɛw ʔaǰɛqəp   **tə** hoqʷanəns   təχəmay.
hihiw   ʔaǰ-aqap   **tə**=həqʷ-anən-s   təχəmay
very   good-smell **CDE.DET**=smell-NMLZ-3POSS cedar
'The smell of cedar is very good.'   [CURRENT DIRECT EVIDENCE: OLFACTORY]

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[7] As noted in Watanabe (2003:79), it is not clear whether the determiners should be posited to have an underlying vowel or not. We have found that *tə* and *šə* are usually (but not always) pronounced with a vowel, whereas *kʷ* is generally vowelless except when accompanied by a possessive proclitic; our underlying forms reflect this. The underlying forms of the possessive proclitics are similarly difficult to ascertain (Watanabe 2003:60, fn. 59). When they are not preceded by a determiner, they are often, but not always, preceded by a vowel (e.g. *(ʔə)tθ=* 'my', *(ʔə)θ=* 'your', *(ʔə)ms=* 'our'). When preceded by a determiner, a vowel usually appears between the two elements. When the determiner is *tə*, *šə*, or * łə*, the vowel may be contributed by either the determiner or the possessive proclitic. When the determiner is *kʷ* or *ł*, it seems the vowel must be contributed by the possessive. For this reason, we have represented the possessive proclitics with a vowel in the phonemic representation. Whether the initial glottal stop that surfaces when the possessive is pronounced with a vowel but not preceded by a determiner should also be included in the representation of the possessive proclitics is not clear. We have chosen not to include the initial glottal stop on the basis that it never appears except when the possessive is not preceded by a determiner (we never get surface forms like *šɛʔɛtθ* 'PDE.DET=1SG.POSS', for instance), in which environment glottal stop insertion may apply to provide an onset for the syllable. The presence/absence of the glottal stop in the phonemic representation of the possessives is not crucial to our analysis, however, and a full analysis of the underlying representation of these forms is beyond the scope of our paper.

3.2 The non-evidential determiner *kʷ*

In contrast to the four determiners that encode direct evidence, *kʷ* is evidence-neutral. It is marginally acceptable in contexts where the speaker has direct evidence, but usually appears in contexts where the speaker only has indirect evidence or no evidence at all. Among other things, speakers use this determiner to refer to entities for which they only have inferential or reportative evidence (12–13), future entities (14), entities under question (15), and entities asserted not to exist (16). In all of these cases, direct evidence determiners are judged as inappropriate.

(12) *Context: You go outside and you see fresh bear footprints in your driveway.*
nišoł čε   {#tə / #šε / **kʷ**} mεχał.   nε   tə ǰɪšɪnmεns.
niš-ʔuł=ča   {#tə / #šə / **kʷ**}=miẋał.   niʔ   tə=ǰišinmin-s
be.here-PST=INFER {CDE.DET / PDE.DET / **DET**}=bear   be.there   CDE.DET=footprint-3POSS
'A bear must have been here. There are its footprints.'   [INFERENTIAL EVIDENCE]

(13) nε k̓ʷa   kʷa:náč   {#ł / **kʷ**} sałtxʷ   ʔə tə q̓ʷεt
 niʔ=k̓ʷa   kʷanáč   {#ł / **kʷ**}=sałtxʷ   ʔə=tə=q̓ʷit
be.there=RPT   sit<STAT>   {F.SG.PDE.DET / **DET**}=woman   OBL=CDE.DET=beach
     xʷa k̓ʷa   t̓og-ut=əs.
     xʷaʔ=k̓ʷa   t̓ug-ut=as
     NEG=RPT   recognize-CTR=3SBJV
  'He said there was a woman sitting on the beach. He didn't recognize her.'
                                                            [REPORTATIVE EVIDENCE]

(14) hiyʔəmttᶿəm   tə čuy   (ʔə) {#tə / #šε / **kʷ**} q̓εq̓snay.
hiy-ʔəm-t=tᶿəm   tə=čuy̓   (ʔə)={#tə / #šə / **kʷ**}=q̓i<q̓>snay
make-IND-CTR=1SG.SBJ.FUT CDE.DET=child OBL={CDE.DET / PDE.DET / **DET**}=shirt<DIM>
'I will make a little shirt for the child.'   [FUTURE ENTITIES]

(15) nεʔa {#təθ / #šεθ / **kʷʊθ**} ʔayšεʔəm?
niʔ=a   {#tə=əθ / #šə=əθ / **kʷ=əθ**}=ʔayša?əm
be.there=Q   {CDE.DET=2SG.POSS / PDE.DET=2SG.POSS / **DET**=2SG.POSS}=change
'Do you have any change?'   [ENTITIES UNDER QUESTION]

(16) *Context: Marianne is about to start weaving a basket with Betty, but she doesn't have an awl. She tells Betty:*
xʷukʷt   {# tətᶿ / #šεtᶿ / **kʷʊtᶿ**} χʷoχʷp̓.
xʷukʷt   {# tə=ətᶿ / #šə=ətᶿ / **kʷ=ətᶿ**}=x̌ʷux̌ʷp̓
not.exist {CDE.DET=1SG.POSS / PDE.DET=1SG.POSS / DET=1SG.POSS}=awl
'I don't have an awl.'   [ENTITIES ASSERTED NOT TO EXIST]

Cases where *kʷ* is used when the speaker has direct evidence often involve generalizations over groups where some members may not have been directly perceived (17).

(17) *Context: A speaker is talking about her grandfather and what he used to do when she was a child. She lived in the same small community as her grandfather, so the people he talked to would generally be familiar to her as well.*

payɛ	qʷɛqʷaysxʷəs	**kʷ** qiqaymɪxʷ	nɛ	tə reserve.[8]
payaʔ	qʷəy~qʷay-sxʷ-as	**kʷ**=qəy~qaymixʷ	niʔ	tə=reserve
always	PL~talk-CAUS-3ERG	**DET**=PL~native.person	be.there	CDE.DET=reserve

'He would always talk to the people there on the reserve.'

It is important to note that the choice between *kʷ* and the other determiners is not based on how certain the speaker is that the referent exists, but on their access to direct evidence. For instance, if the speaker is talking of her great-grandmother whom she never met, she can use the *kʷ* determiner, but neither of the direct evidence feminine determiners, even though she knows for sure that her great-grandmother existed (18a), repeated here from (1d). If she had met her, *ł* would be used (18b).[9]

(18) a. xʷač   k̓ʷʊnʊxʷanoł
         xʷaʔ=č   k̓ʷən-əxʷ-an-ʔuł
         NEG=1SG.SBJ see-NCTR=1SG.SBJV-PST
             {#łətθ / #łətθ / **kʷʊtθ** /
             {#łə=ətθ / #ł=ətθ / **kʷ**=ətθ /
             {F.SG.CDE.DET=1SG.POSS / F.SG.PDE.DET=1SG.POSS / **DET**=1SG.POSS /
                 #šɛtθ} čɛčɛmɛqʷoł.
                 #šə=ətθ}=čačamiqʷ-ʔuł
                 PDE.DET=1SG.POSS}=great.grandmother-PST
         'I never saw my late great-grandmother.'

      b. k̓ʷʊnʊxʷołč   łətθ čɛčɛmɛqʷoł.
         k̓ʷən-əxʷ-uł=č   ł=ətθ=čačamiqʷ-ʔuł
         see-NCTR-PST=1SG.SBJ **F.SG.PDE.DET**=1SG.POSS=great.grandmother-PST
         'I saw my late great-grandmother.'

Similarly, when speaking of a (trustworthy) friend's family whom I have not met, I can use the non-evidential determiner *kʷ*, but not the PDE determiner *šə*, even though I have reliable evidence of their existence from my friend's prior reports (19).

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[8] The use of the CDE determiner *tə* before 'reserve' in (17) is illustrative of a frequent tendency in narratives for the speaker to shift perspective, using the determiners as if the speaker were present within the situation described in the story. Within stories, the speaker seems to take roughly the perspective of the protagonist (see also Gerdts & Hukari 2004:8 on Halkomelem). In this case, since the story is recounting the speaker's own childhood, she is likely taking the perspective of herself as a child, and her use of the determiners is appropriate to the evidence available to her as a child on the reserve.

[9] The vowel between the determiner and the possessive proclitic in *łətθ* in (18b) is not from the determiner (otherwise the determiner would be *łə*, which encodes CDE). It seems likely that the vowel is contributed by the possessive proclitic — see footnote 6 for further discussion.

(19) *Context: I'm telling you that Daniel has gone home for the holidays to see his family. I've never met his family.*

kʷa	θo	Daniel	gɪ̌ɛs.	θo k̓ʷa	k̓ʷʊtəs
kʷa	θu	Daniel	gəǰa-s.	θu=k̓ʷa	k̓ʷə-t-as
CLD.DIST	go	Daniel	land-3POSS	go=RPT	see-CTR-3ERG

{#šɛ / **kʷ**} ʔayištəns.
{#šə / **kʷ**}=ʔayištən-s
{PDE.DET / **DET**}=cousin-3POSS

'Daniel has gone home to his country. He's gone to see his cousins.'

3.3 Gender

As seen above, both *łə* and *ł* are specialized in terms of gender, occurring with female referents (see Watanabe 2003) — primarily with humans as in (5), (7), and (18b), but occasionally with animals as in (20), and also with anthropomorphized animals in traditional stories as in (21).

(20) papʔegən **łə** qegaθ.
papʔigan **łə**=qigaθ
pregnant **F.SG.CDE.DET**=deer
'The deer is pregnant.'

(21) matəs θiṅ **łə** χawgəs.
maʔ-t-as θiṅ **łə**=x̣awgas
obtain-CTR-3ERG F.DEM **F.SG.CDE.DET**=grizzly.bear
'He took Grizzly (as his wife).' (Watanabe 2003:553)

The only exception to this gender restriction occurs in contexts where the referenced entity is considered small, an observation first made by Davis (1974). In this case, even entities whose natural gender is non-female (e.g., a basket) can be introduced by *łə*, as in (22).[10,11] Note that a noun need not be formally diminutive to take the feminine determiner, so long as the referent is small (23).

(22) ʔɛʔaǰitɛn-mot {tə / **łə**}=pɪpčus Gloria.
ʔiʔaǰitin-mut {tə / **łə**}=pə<p>ču-s Gloria
cute-INT {CDE.DET / **F.SG.CDE.DET**}=basket<DIM>-3POSS Gloria
'Gloria's little basket is really cute.'

(23) ʔɛʔaǰitɛn-mot {tə / **łə**}=titoⅼ̇ pɪčus Gloria.
ʔiʔaǰitin-mut {tə / **łə**}=titul pəču-s Gloria
cute-INT {CDE.DET / **F.SG.CDE.DET**}=little basket-3POSS Gloria
'Gloria's little basket is really cute.'

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[10] Gerdts and Hukari (2004) observe that the feminine determiner in Island Halkomelem is also commonly used for diminutive nouns.

[11] We also predict that *ł* can be used for diminutive entities for which the speaker has previous, but not current, direct evidence, but we still need to elicit these examples.

Jurafsky (1996:546) notes that diminutivized entities in languages across the globe (e.g., Hebrew, Hindi, Berber) are often conceptualized as feminine, and attributes this pattern to a particular conceptual metaphor which links gender and size, namely SMALL THINGS ARE WOMEN.

3.4 Number

While the non-feminine determiners in the system are number-neutral, both *ɬə* and *ɬ* can only be used with singular, but never with plural referents (24a–b). In this respect, *ɬə* and *ɬ* pattern like their cognates across the Central Salish branch (see Suttles 2004, Montler 2007, inter alia). The restriction to singular referents also applies to diminutives, as shown in (24c).

(24) a. *Context: You see a group of women on the beach now.*
        nɛʔɛw   {#**ɬə** / tə} nəgəpti   ʔə tə q̓ʷɛt.
        niʔ-iw   {#**ɬə** / tə}=nəgəpti   ʔə=tə=q̓ʷit
        be.there-PL   {**F.SG.CDE.DET** / CDE.DET}=women   OBL=CDE.DET=beach
        'There are women on the beach.'

    b. *Context: You saw a group of women standing on the beach yesterday.*
        nɛʔ   kʷak̓ʷʔɛšitoɬ   {#**ɬ** / šə} nəgəpti   sǰɛsoɬ.
        niʔ   k̓ʷa\<k̓ʷ>ʔiš-it-ʔuɬ {#**ɬ** / šə}=nəgəpti   sǰasuɬ
        be.there   stand\<PL>-STAT-PST {**F.SG.PDE.DET** / PDE.DET}=women yesterday
            ʔə tə q̓ʷɛt.
            ʔə=tə=q̓ʷit
            OBL=CDE.DET=beach
        'There were women standing on the beach yesterday.'

    c. hɛhɛw ʔɛʔaǰitɛnmot {#**ɬə** / tə} pɛʔɛpčus   Gloria.
        hihiw ʔiʔaǰitin-mut {#**ɬə** / tə}=p\<iʔ>i\<p>ču-s   Gloria
        really cute-INT   {**F.SG.CDE.DET** / CDE.DET}=basket\<PL>\<DIM>-3POSS Gloria
        'Gloria's little baskets are very cute.'

4 Discussion

Based on the data discussed in the previous section, we propose a re-analysis of the determiner system of ʔayʔaǰuθəm which organizes the paradigm primarily around evidentiality. The main paradigmatic distinction divides the direct evidence determiners from the evidence-neutral determiner. Direct evidence determiners are further divided by the timing of the speaker's access of direct evidence for the referent, creating a distinction between previous direct evidence and current direct evidence. Finally, there is a gender and number split among the direct evidence determiners that crosscuts the timing-of-evidence-access distinction. Hence, the determiner system of ʔayʔaǰuθəm can be organized as in Table 5.

Table 5: New analysis of ʔayʔaǰuθəm determiners

	Direct Evidence		Evidence-Neutral
	Current	**Previous**	
Gender/Number-Neutral	*tə*	*šə*	k^w
Feminine SG	*ɫə*	*ɫ*	—

Formally, we propose a Speasian analysis of evidentiality (Speas 2010; Kalsang et al. 2013) according to which ʔayʔaǰuθəm determiners encode relationships between two situations: an **information situation** (IS / s_I) and a **discourse situation** (DS / s_D).[12] The former is the minimal, contextually salient situation in which the speaker accesses evidence for the referent's existence, while the latter refers to the minimal situation in which the speaker utters *p*.

To derive the direct evidence reading associated with *tə*, *šə*, *ɫə*, and *ɫ*, the referent (*x*) must be included in the IS ($x \subset s_I$). This means that the referent is present in the same situation as the speaker at the point where the speaker has evidence of its existence.[13] The differences between CDE and PDE result from different configurations between the IS and the DS. The CDE determiners *tə* and *ɫə* are used when the DS is included in the IS ($s_D \subset s_I$), meaning that the speaker has evidence for the existence of the referent at the time of utterance. The PDE determiners *šə* and *ɫ*, in contrast, are used when the DS is excluded from the IS ($s_D \not\subset s_I$), indicating that the speaker does not have evidence for the existence of the referent *x* at the time of utterance.

For the CDE determiners, we thus have the relations in (25a): the referent is included in the IS, meaning that the speaker has direct evidence for the referent, and the DS is included in the IS, meaning that the speaker has this evidence at the time of speaking. For the PDE determiners, we have the relations in (25b): the IS includes the referent, meaning that the speaker has direct evidence for the referent's existence, but the DS is not included in the IS, meaning that the speaker does not have this evidence at the time of speaking.

(25) a. $[\![CDE]\!]^{S_D} (x)(s_I) = 1$ iff $[(x \subset s_I) \wedge (s_D \subset s_I)]$
  b. $[\![PDE]\!]^{S_D} (x)(s_I) = 1$ iff $[(x \subset s_I) \wedge (s_D \not\subset s_I)]$

To take a concrete example, in (26) — repeated from (4) above — the bear (the referent) is part of the IS, which is the salient situation in which the speaker has evidence of the bear's existence: the speaker seeing the bear. The DS is also contained in the IS, since the speaker utters (26) while still seeing the bear. In this case, therefore, the speaker has CDE. These relations between situations are illustrated in Figure 1.

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[12] We assume that situations are parts of worlds with particular temporal-spatial locations.
[13] Indirect evidence would be encoded ($x \not\subset s_I$) if the referent were not included in the IS (see, e.g., Speas 2010). This is the case for example if the speaker perceives some clues to the referent's existence, or hears a report of their existence, in the IS. However, we do not argue for any determiners in ʔayʔaǰuθəm which specifically require indirect evidence.

(26)   *Context: You look out the window and there's a bear in your yard.*
       nɛ   {**tə** / #šɛ / #kʷ} mɛχaɬ.
       niʔ   {**tə** / #šə / #kʷ}=miẋaɬ
       be.there   {**CDE.DET** / PDE.DET / DET}=black.bear
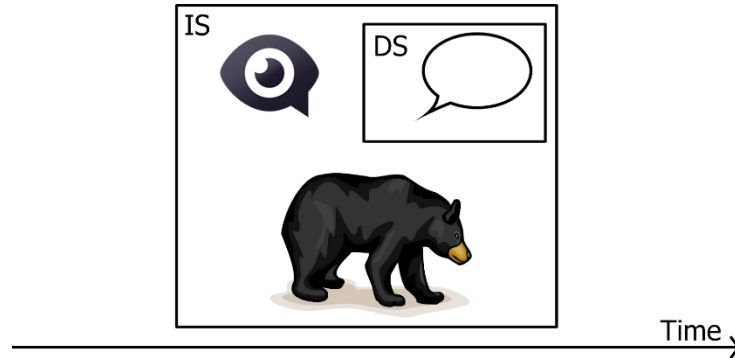   'There's a bear.'   [CURRENT DIRECT EVIDENCE]

Figure 1: The relations between situations for sentence (26)

For PDE, we can examine (27), repeated from (6) above. Here, the bear is within the IS, which again is a situation where the speaker sees the bear. In this case, however, the DS is not included in the IS. The speaker's utterance does not occur in the same situation where the speaker sees the bear, but comes later, after the bear is no longer present. Figure 2 illustrates the situational relations for this scenario.

(27)   *Context: I'm at your house, telling you about the bear encounter I had this morning.*
       nɛʔoɬ   {#tə / **šɛ** / ʔkʷ} mɛχaɬ   ʔə šɛtθ ʔasq̇ič
       niʔ-uɬ   {#tə / **šə** / ʔkʷ}=miẋaɬ   ʔə=šə=ətθ=ʔasq̇iyč
       be.there-PST   {CDE.DET / **PDE.DET** / DET}=black.bear   OBL=PDE.DET=1SG.POSS=outside
           skʷiǰoɬ.
           skʷiǰuɬ
           morning
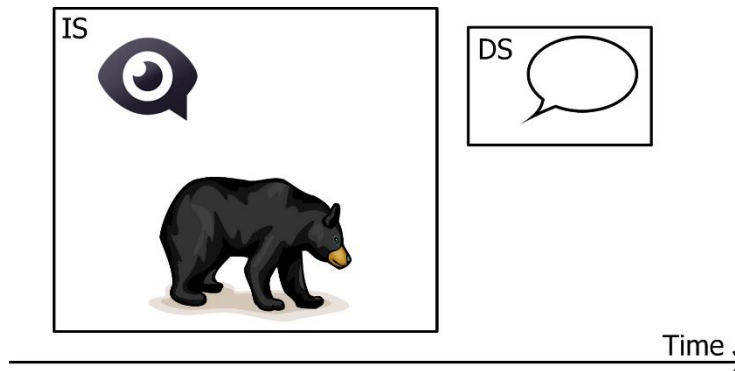   'There was a bear in my yard this morning.'   [PREVIOUS DIRECT EVIDENCE]

Figure 2: The relations between situations for sentence (27)

To capture the relations between situations encoded by the different determiners, we propose the lexical entries in (28). Each of the evidential determiners in (28a–d) take the information situation as an argument; we assume this argument is syntactically provided as a silent situation pronoun (following, e.g., Elbourne 2013, Renans 2016). The formula in (28a) presupposes the existence of a unique entity that satisfies the description of the noun (P) and for which the speaker has CDE.[14],[15] The output of the function is the unique individual with these qualities. The formula in (28b) is minimally different, but requires that the speaker has PDE for the referent. The entries in (28c) and (28d) are parallel to (28a–b), but place additional restrictions such that the referent must be feminine and singular. The entry in (28e) is different from the rest, simply introducing existential quantification over individuals, but not requiring any type of evidence for the individual's existence. This allows it to be used in cases where the speaker has only indirect evidence, as in (12) and (13). Furthermore, since the existential quantification is part of the at-issue contribution, it can be embedded under negation, future marking, or question operators, deriving readings where the referent is not asserted to exist (14) and (15), or asserted not to exist (16). Note that the situation argument in (28e) is not an information situation, but rather the 'topic situation' — the situation for which the whole proposition is true or false (see, e.g., Kratzer 2019).

(28) a. $[\![t\partial]\!]^{S_D} = \lambda P_{\langle e,st\rangle}\lambda s_I : \exists!x\,[P(x)(s_I) \wedge CDE(x)(s_I)]\,.\,\iota y\,[P(y)(s_I) \wedge CDE(y)(s_I)]$

b. $[\![\check{s}\partial]\!]^{S_D} = \lambda P_{\langle e,st\rangle}\lambda s_I : \exists!x\,[P(x)(s_I) \wedge PDE(x)(s_I)]\,.\,\iota y\,[P(y)(s_I) \wedge PDE(y)(s_I)]$

c. $[\![\ell\partial]\!]^{S_D} = \lambda P_{\langle e,st\rangle}\,\lambda s_I : \exists!x\,[P(x)(s_I) \wedge CDE(x)(s_I) \wedge SING(x) \wedge FEM(x)]\,.$
  $\iota y\,[P(y)(s_I) \wedge CDE(y)(s_I) \wedge SING(y) \wedge FEM(y)]$

d. $[\![\ell]\!]^{S_D} = \lambda P_{\langle e,st\rangle}\lambda s_I : \exists!x\,[P(x)(s_I) \wedge PDE(x)(s_I) \wedge SING(x) \wedge FEM(x)]\,.$
  $\iota y\,[P(y)(s_I) \wedge PDE(y)(s_I) \wedge SING(y) \wedge FEM(y)]$

e. $[\![k^w]\!]^{S_D} = \lambda P_{\langle e,st\rangle}\lambda Q_{\langle e,st\rangle}\lambda s\,.\,\exists x\,[P(x)(s) = 1 \wedge Q(x)(s) = 1]$

where $[\![SING]\!](x) = 1$ iff $\#x = 1$ and $[\![FEM]\!](x) = 1$ iff x is female

The ʔayʔaǰuθəm determiners in (29) vary in terms of their presuppositional loads. While k^w does not carry any presuppositions (i.e., it is neutral with regard to evidentiality, gender, and number), $t\partial$, $\check{s}\partial$, $\ell\partial$, and ℓ presuppose direct evidence, and $\ell\partial$ and ℓ further require the referent to be singular and female. From this, we might expect the less specified determiners to have a wider distribution, being felicitous also where more highly specified determiners can be used. This is not the case, however. The direct evidence determiners are preferred over k^w whenever the speaker has direct evidence for the existence of the referent, as we saw for instance in (4), (6),

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[14] We use the term 'presuppose' to refer to this not-at-issue contribution, but there is no restriction placed on the common ground; the addressee need not also have evidence for the referent. The $t\partial$ determiner is frequently used at the beginning of narratives, for instance, where the addressee is not yet familiar with the characters. See Matthewson (2008) concerning the absence of restrictions on the common ground in Salish.

[15] While we use the term 'unique', ʔayʔaǰuθəm determiners, like determiners in St'át'imcets (Matthewson 1998) and Sḵwx̱wú7mesh (Gillon 2006/2013) do not require a unique referent in the common ground (see Huijsmans et al. 2018); Salish determiners generally do not seem to place restrictions on the common ground (see preceding footnote). The referent is unique in the sense of having been singled out by the speaker in the salient information situation.

and (7). Similarly, the feminine determiners are preferred over the gender-neutral determiners where the referent is singular and female, as for instance in (5) and (7).[16]

To account for this distribution, we propose that more highly specified determiners are chosen over less specified determiners, wherever they can be appropriately used. This follows from general conversational principles privileging more informative items in a paradigm over less informative ones (e.g., Grice 1975, Heim 1991, Bochnak 2016). The result is that the speaker will choose a direct evidence determiner over the evidence-neutral determiner whenever direct evidence is accessed, and a feminine singular determiner over a gender-neutral determiner when the referent is singular and female (or diminutive).

As we saw above, however, it is not always the case that only one determiner is acceptable in any discourse context. Sometimes a CDE determiner is preferred, but a non-evidential determiner is also marginally acceptable (e.g., 10). A gender-neutral determiner is often marginally acceptable even with female referents, as in (7), and either a gender-neutral or a feminine determiner is equally acceptable with diminutive, non-female referents, as in (22) and (23).

This supports the proposal that the default determiner choices outlined in the paragraphs above are pragmatic effects (because they can be overridden), rather than semantically hardwired. Thus, these facts speak against an alternative analysis in which k^w semantically encodes the absence of direct evidence (rather than being evidence-neutral, as we propose), and in which the determiners we analyze as gender-neutral are instead semantically non-feminine.

5   Conclusion and implications

In this paper, we have argued that ʔayʔaǰuθəm determiners encode evidentiality, as well as gender and number for a subset of determiners. We proposed that the determiners encode CDE and PDE through relations between situations. When the referent is present within the same situation as the speaker uttering the proposition, a CDE determiner is used. When the referent was present within a previous situation that the speaker experienced, but is not present within the situation in which the speaker utters the proposition, a PDE determiner is used. If the speaker has not been within the same situation as the referent, the neutral determiner is used. We have also shown that there are two CDE determiners and two PDE determiners: one used for singular feminine or diminutive referents, and one used elsewhere.

Previous descriptions of ʔayʔaǰuθəm determiners employed notions such as 'visible/non-visible' (Davis 1973), 'present/non-present' (Harris 1981), 'former' (Harris 1981) and 'remote' (Davis 1973; Watanabe 2003) in order to describe their semantic contribution. This type of description is prevalent throughout the family. A distinction corresponding to 'presence' vs. 'absence' has been proposed for St'át'imcets (Van Eijk 1985/1997; Matthewson 1998), Musqueam (Suttles 2004), Secwepemctsin (Kuipers 1974), Nɬeʔkepmxcín (Koch 2006), Upriver Halkomelem (Galloway 1993; Wiltschko 2002), Saanich (Montler 1986), and Lummi (Jelinek & Demers 1994), for example. Similarly, a 'visible' vs. 'non-visible' distinction has been proposed for Sechelt (Beaumont 1985), Musqueam (Suttles 2004), Nɬeʔkepmxcín (Koch 2006), Upriver Halkomelem (Galloway 1993; Wiltschko 2002), Saanich (Montler 1986), Lummi (Jelinek & Demers 1994), and Klallam (Montler 2007). Note that both these distinctions have been proposed

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[16] While this is certainly the case when the referent is human, it is less clear that the preference for the feminine determiner is as strong when the referent is an animal, even if clearly female (e.g. with young). This still requires further investigation.

to play a role in the same language in some cases and even to co-vary, as illustrated in Table 6 for Musqueam, Table 7 for Lummi, and Table 8 for Sḵwx̱wú7mesh.

Table 6: Musqueam determiners (Gillon 2006:190, adapted from Suttles 2004:340)

	Present, visible	Nearby, invisible	Remote or hypothetical
Non-female	*tə, tθə*	*kʷθə, kʷə, kʷ*	*k̓ʷə, k̓ʷ*
Female	*θə*	*łə, kʷłə, ł, kʷł*	*kʷsə*
Oblique		*λ̓*	

Table 7: Lummi determiners (Gillon 2006:203, adapted from Jelinek & Demers 1994:717)

	Proximal, visible	Neutral	Distal, out of sight	Remote
+Female	*sl'ə*	*sə*	*kʷə*	*kʷsə*
General	*tl'ə*	*cə*	*kʷə*	*kʷcə*

Table 8: Sḵwx̱wú7mesh determiners (Gillon 2006:9)

	Deictic			Non-deictic
	Neutral	**Proximal**	**Distal, invisible**	
Gender-neutral	*ta*	*ti*	*kwa*	*kwi*
Feminine	*lha*	*tsi*	*kwelha*	*kwes*

Distinctions of visibility vs. invisibility and presence vs. absence are clearly widespread throughout the previous literature on Salish determiners. Our evidential analysis unites these two notions under 'current direct evidence', which usually involves a visible, present referent, and 'previous direct evidence', which involves a non-visible, absent referent who is known from previous experience. An evidential analysis has also been previously proposed for determiners in St'át'imcets (Gutiérrez & Matthewson 2012, Gambarage & Matthewson 2019). While extensive elicitation and examination of previous records would be necessary to determine whether our proposal could be extended to other languages in the family, we think it likely that other Salish determiner systems could also be characterized in terms of evidentiality.

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