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Standard Arabic and Scottish Gaelic: Shared typological features

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Abstract

Although Celtic languages and Semitic languages belong to separate language families, they share numerous typological similarities that are common to Semitic languages but not shared by Standard Indo-European languages. The occurrence and the reasons for these similarities have been the focus of a whole research field, concerned with linguistic, historical, and anthropological hypotheses about possible reasons for said similarities, as well as with linguistic analyses and comparisons of specific Celtic and Semitic languages, such as Hebrew, Welsh and Breton. This thesis aims to fill the knowledge gap concerning any similarities between Standard Arabic and Scottish Gaelic on the basis of existing reference grammars and academic research. An overview of the research background introduces the two languages and then accounts for a number of scholarly contributions concerned with the substrate hypothesis, or contact theory, as the reason for similar grammatical features shared by Semitic and Celtic languages. The methodological approach section presents the features to be examined as well as the sources employed for the investigation. Each feature is subsequently outlined descriptively and any similarities occurring in the two languages are thus highlighted. The results are then compared, where applicable, to the literature about Semitic/Celtic similarities that mention Arabic and/or Scottish Gaelic and discussed from a typological perspective. As a result, the similarities found between Standard Arabic and Scottish Gaelic are deemed as insufficient evidence for the validity of the substrate hypothesis.

Keywords:

Standard Arabic, Scottish Gaelic, Semitic, Celtic, substrate hypothesis, contact theory, structural similarity, typological feature, typological universals.

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1. Introduction

Celtic languages and Semitic languages belong to two separate language families - the former are Indo-European while the latter belong to the Afro-Asiatic family, with distinct genetical trees, histories and geographical spread. However, there are numerous typological similarities between the two groups, such as VSO word order, conjugated prepositions, and verbal nouns. These grammatical features are typologically widespread in Semitic languages but are not shared by any other Indo-European language.

Whether these similarities are coincidences or not has been the focus of a whole research field, which is concerned with mainly two types of areas of interest that frequently intersect. The first comprises linguistic, historical, and anthropological hypotheses and arguments in favour of or against reasons for typological and lexical similarities between Celtic and Semitic languages. The second focuses on the linguistic typological similarities between Semitic and Celtic languages, both in general terms and in studies of specific languages, such as comparisons between Welsh and Hebrew or between Arabic and Breton. Surprisingly, there does not seem to exist any studies explicitly discussing similarities between Arabic and Scottish Gaelic - actually, Scottish Gaelic is seldom mentioned in this discussion, with Irish more frequently referred to instead.¹

This thesis aims to fill the knowledge gap concerning any similarities between Standard Arabic and Scottish Gaelic on the basis of existing reference grammars and academic research. It attempts to answer the following research questions:

What are the grammatical features shared by Standard Arabic and Scottish Gaelic?

To what extent do similarities between Standard Arabic and Scottish Gaelic provide evidence for the hypothesis of a pre-Celtic, Afro-Asiatic substrate from a typological perspective?

After this brief introduction, the thesis proceeds with an account of the research background, which first presents Standard Arabic and Scottish Gaelic in general terms, and then overviews a selection of the scholarly contributions that have been concerned with the reasons for typological similarities between Semitic and Celtic languages. Section 3 describes the thesis' methodological approach, where the features to be examined are listed and the sources for the investigation are presented. The research question is then answered in Section 4 through the examination of each feature in both Arabic and Scottish Gaelic presented in the list. Each feature is outlined descriptively and illustrated with glossed examples, and similarities between the two languages are thus highlighted. The results are then compared, where applicable, to the literature about Semitic/Celtic similarities that mention Arabic and/or Scottish Gaelic. Section 5 discusses the results from a typological perspective. A summary concludes the thesis.

¹ As shown in their respective pages in the *Ethnologue* database, the autonym for Irish is *Gaeilge* and the one for Scottish Gaelic is *Gàidhlig*, which is the reason why the two languages are often mistaken for the same language. Although they are both descendants of the language spoken by the Gaels, Scottish Gaelic and Irish Gaelic (or, rather, just Irish) are two similar but very distinct languages. (Britannica Academic, n.d.). To the best of my knowledge, there are no studies comparing Arabic and Irish, either.

2. Research background

This section presents first the two languages that are under discussion and then accounts for some scholarly contributions concerned with the occurrence of similarities between Semitic and Celtic languages.

2.1 Standard Arabic

Standard Arabic, more exactly Modern Standard Arabic (*al- arabiyya* [al-ʕarabij:a] or *al-fuṣḥā*, “the purest”), is a West Semitic language of the Afro-Asiatic family. Standard Arabic (MSA) is nobody’s mother tongue, for all Arabic speaking countries are characterised by diglossia, a phenomenon defined as the coexistence of two varieties, a “high” and a “low”, of the same language.² MSA constitutes the “high” variety and therefore the formal and the written standard norm: it is learnt through formal schooling and it is in all respects the modern descendant of Classical Arabic or Qur’ān Arabic. *Ethnologue* reports a total of approx. 274 million users in all countries and mentions its “national” status in Saudi Arabia, on the basis of Saudi Arabia’s *Basic Law of Governance 1992*, where 24.9 million language users are reported. The “low” varieties, also referred to as dialects, vernaculars or colloquials, are the languages used in every day’s life and in informal contexts.³ They differ from MSA not only in terms of phonological, morphological, and syntactical features but also in some lexical items - to such an extent that, depending also on their reciprocal geographical distance, they are sometimes mutually unintelligible. The colloquials are not taken into consideration in this thesis; instead, Standard Arabic is chosen for the purpose of this thesis because of its conservative character and its historical stability due to its status as a primarily written language.

The Arabic language, due to its status of sacred language, has a long and extensive linguistic tradition, in Arabic, that dates back to the 700s. Arab (and later Western) grammarians have since then developed a number of fundamental theoretical frameworks,⁴ which constitute a vast field that comprises both the study of the Arabic language per se as well as different linguistic disciplines.

2.2 Scottish Gaelic

Scottish Gaelic ([galik], *Gàidhlig* [ka:ɫɪc], Nance & Ó Maolalaigh 2021)⁵ is a Goidelic language of the Celtic branch of the Indo-European family. Insular Celtic languages are classified into two branches, namely the Goidelic branch, which comprises Scottish Gaelic, Irish and Manx, and the Brythonic⁶ branch, which groups Welsh, Breton and Cornish.⁷ Scottish Gaelic is spoken by approx

² “A relatively stable language situation in which, in addition to the primary dialects of the language (which may include a standard or regional standards), there is a very divergent, highly codified (often grammatically more complex) superposed variety, the vehicle of a large and respected body of written literature, either of an earlier period or in another speech community, which is learned largely by formal education and is used for most written and formal spoken purposes but is not used by any sector of the community for ordinary conversation.” (Ferguson 1959, p. 336).

³ The advent of the internet has been slowly changing the situation, and the dialects are sometimes used in blogs, chats and social medias, but they are still not formally regulated and considered “spoken” varieties.

⁴ See for example Bohas et al. (1990), Owens (2013) and Ryding and Wilmsen (2021).

⁵ The World Atlas of Language Structures (WALS), an online database of structural properties of languages gathered from descriptive materials, cites *Gaelic (Scottish)* and *Scots Gaelic* as alternative names.

⁶ Sometimes spelled Brittonic in the literature, for ex. in Jongeling (1995).

⁷ <https://glottolog.org/resource/languoid/id/celt1248>

57,000 people in Scotland, and is the mother tongue of approximately 1,000 speakers in Canada.⁸ *Ethnologue* defines the language status of Scottish Gaelic as “provincial”, on the basis of the *Gaelic Language (Scotland) Act 2005*.

Scottish Gaelic verbal categories, in particular tense and aspect systems, and its prepositional pronouns,⁹ are among the language’s most researched topics.¹⁰ Also extensively researched is its system of phonological mutations and the ways they affect morphological and syntactic processes.¹¹ Phonological mutations are typologically common to all Celtic languages: Lamb writes that the Celtic languages “are famous for the various ways in which their consonants regularly change in certain conditions” and “lenition and palatalisation take a heavy loading for marking case, gender and definiteness” (2008, p. 199 and p. 205 respectively). In his discussion about the typological problem of categorising the morphophonological mutations, Adger describes the Scottish Gaelic morphological processes as an interplay of initial lenition, final palatalisation, stem modification and suffixation (2010, p. 292).

2.3 Standard Arabic and Scottish Gaelic at a glance

The following table reports, side by side, the typological features of Standard Arabic and of Scottish Gaelic as listed in their respective *Ethnologue* language pages.¹² A number of similarities between the two languages are already evident, despite their belonging to two separate, different language families:

Standard Arabic

(Semitic, Afro-Asiatic)

VSO;

prepositions;

noun head initial;

gender (masculine/feminine);

dual number;

definite and indefinite affixes;

case-marking (3 cases);

verb affixes mark number, gender of subject;

aspect;

28 consonant and 6 vowel phonemes;

non-tonal;

stress on first syllable;

triliteral roots, few affixes.

Scottish Gaelic

(Celtic, Indo-European)

VSO;

prepositions;

noun head initial;

gender (masculine/feminine);

definite article;

case-marking (3 cases);

verb affixes mark person, number;

comparatives;

33 consonants, 18 vowels, 10 diphthongs;

non-tonal;

stress on first syllable.

Table 1 - - Standard Arabic and Scottish Gaelic in www.ethnologue.com

⁸ Data from 2011 Scotland’s Census and 2016 Statistics Canada Census respectively.

⁹ Also called pronominal prepositions, conjugated prepositions and inflected prepositions, see Stewart & Joseph (2009).

¹⁰ For example Adger (1996), Carmody (1945), Landgraf (2011), Ramchand (1993a, 1993b, 1997, 2005), Reed (2012), Stewart & Joseph (2009).

¹¹ See for example Green (2006), Hannahs (2011), Ladefoged et al. (1998) and Stewart (2013).

¹² <https://www.ethnologue.com>.

2.4 Afro-Asiatic and Insular Celtic language similarities: the substrate hypothesis

To various extents and different degrees, all the Insular Celtic languages show a number of syntactic features that are not common to Indo-European languages and that are, instead, common in the Afro-asiatic language family.¹³ Structural similarities between Insular Celtic and Semitic languages were first mentioned in the 1600s, when John Davies noted a number of structural similarities between Welsh and Hebrew,¹⁴ but it is the seminal work of John Morris-Jones, entitled *Pre-Aryan syntax in Insular Celtic* (1900), which examined similarities between Welsh and Egyptian, that boosted the researchers' interest in such correspondences.

Since then, a considerable number of scholars have contributed to the debate concerning possible explanations for the similarities between the respective languages' features. One theoretical hypothesis postulates the existence of a pre-Celtic substrate,¹⁵ i.e. the possibility of Afro-Asiatic colonisation of coastal regions of Western Europe before the arrival and settlement of Indo-European migrants. This position is commonly referred to as the substrate (also substratum) hypothesis or the contact theory (Gensler 1993, 2007; Hewitt 2009; Isaac 2008; Jongeling 1987, 1995, 2000; Matasović 2007; Pokorny 1960, Venneman 2001, 2003; Wagner 1981). Another theoretical standpoint refutes said hypothesis and maintains that the similarities are a simple matter of language-internal developments. Consequently, since such structural features are not exclusively shared by Insular Celtic and Semitic languages but are typologically common to several other languages, they cannot be explained or justified on any anthropological, historical, or linguistic ground. In order to provide evidence for their theories, a number of scholars also examined in detail and compared existing similarities between specific Insular Celtic and Semitic languages. The most cited supporters of the substrate hypothesis, or contact theory, in the literature are, in an approximate chronological order of their most influential works, Julius Pokorny (1960), Heinrich Wagner (1981, 1987), Orin Gensler (1993, 2007), Karel Jongeling (1987, 1995, 2000) and Theo Vennemann (2001, 2003, 2012). Among the scholars that have argued against the substrate hypothesis, Graham Isaac (2008), Steve Hewitt (2009) and Ranko Matasović (2007) are among the most relevant.

Julius Pokorny's work covered several decades from the 1920's to the 1960's and focused mainly on Irish. In one of his later articles, Pokorny described in which ways the language of Paleolithic, Neolithic, and Megalithic invaders as well as the language of what he called "the Beaker Folk" (all between 2500 and 1900 B.C.) affected Insular Celtic (1960). Hewitt described Pokorny's text as "often impressionistic, with numerous examples (never glossed, at best paraphrased) [...] (including unseemly references (1927:137) to '*Negersprachen* deemed '*ungemein primitiv*')" (2009, p. 974). Pokorny's approach was described as "sometimes non-linguistic" due to his reliance "on racial-archeological considerations that can only be regarded as abstruse today." (Stifter 2007, p. 3)

¹³ Different authors use different classification terminology: Gensler, Hewitt and Vennemann uses *Hamito-Semitic* to mean what is now generally called *Afro-Asiatic* (see Baldi & Page (2006, p. 2185) and Gensler (2007, p. 220)).

¹⁴ Hewitt dates it back to 1621 (2009, p. 973), Jongeling also mentions Davies's introduction to his dictionary published in 1632 (1995, p. 135).

¹⁵ Jongeling cites the following definition of *substratum theory* from Mario Pei's *Glossary of Linguistic Terminology* (1966): "the belief that the linguistic substratum (i.e. a language displaced as the dominant tongue in its area by another language of conquerors, colonizers, etc.) is the cause of linguistic or phonological changes in the replacing or superimposed language, and that as the speakers of socially, politically, economically or otherwise subordinate language adopt the language of the conquerors or colonizers, or of a culturally or economically more advanced nation, differences in pronunciation cause words, forms and constructions to be affected by under-surface speech habits" (1995, p. 137-138).

Heinrich Wagner claimed that the Insular Celtic features and grammatical categories that are “hardly found in any Indo-European languages” were a result of the “revolutionary changes” that occurred in Britain and Ireland between the IV and the VI centuries A.D. (1987, p. 19). He claimed that

North-Eastern Africa must have been, in prehistoric as well as in early historical times, a regular target for nomadic invaders from Arabia, Syria and also from further east and northeast. As a result of these invasions, Hamitic and Proto-Hamitic speech was spread [...] not only all over Northern Africa but also, if my reading of the linguistic affinities of Ancient Iberian, Basque and the substratum of Insular Celtic is correct, to Western Europe. (1981, p. 146)

Stifter described Wagner’s article from 1981 as a “glimpse of his rather idiosyncratic and erratic train of thoughts and arguments” (2007, p. 3).

Gensler’s Ph. D. dissertation *A typological evaluation of Celtic/Hamito-Semitic syntactic parallels* (unpublished 1993; extracts published for the first time in print in 2007) is considered as a main theoretical basis for the substrate hypothesis as well as the work that revived the interest in the matter, for its “firm methodological footing” (Stifter 2007, p. 3) in language typology and “for his thorough analysis and the sheer wealth of linguistic evidence” (Hewitt 2009, p. 976). In his work, Gensler identified a total of 17 structural similarities shared by Insular Celtic and Hamito-Semitic languages that are not common among languages in the world. Although he was aware that the typological method cannot prove the veracity of the substrate hypothesis and that it cannot “articulate prehistoric scenarios” (2007, p. 219), he stated that it provided a “demonstration that prehistoric contact of some sort fits the facts better than the other explanatory alternatives” (2007, p. 219) and that it “represents a legitimate middle ground between proof and speculation” (2007, p. 218).

Karel Jongeling’s work focused on the comparison between Welsh and Hebrew (1987, 2000). He also authored a detailed account of the history of the parallels between Celtic and Semitic languages which covered numerous research studies, since Davies’s in the 1600s up to Gensler’s 1993 doctoral thesis. About the latter Jongeling stated that “although there are some points in which we do not agree with Gensler [...], his argument is sound and systematic” (2000, p. 63). Jongeling contributed to the debate about the substrate hypothesis in his article *Afro-Asiatic and Insular Celtic* (1995), where he affirmed that although Welsh and Hebrew share a number of typological characteristics, said characteristics are common to other languages in the world. Therefore, “as language types occur in a rather irregular way all over the world, all questions of historical or other forms of relationship can be left aside” (1995, p. 147). However, after examining both geographical and chronological issues, where he also took into consideration Continental Celtic languages,¹⁶ he postulated that

It seems to us more probable that these features are the result of an influence common to both branches of Celtic that reached these [British] Isles, in other words a substratum. Whether we have to suppose one substratum language, or more than one of the same type remains a problem of course, but we may suppose that both Irish and Brittonic were at least influenced by languages related to each other. (1995, p. 153)

In his conclusion, which, he claimed, is analogous to Wagner’s, he wrote that

Because of the absence of any word that may be connected with certainty to an Afro-Asiatic substratum we suppose that we can only conclude that the substratum was not Afro-Asiatic, but it must have been a language (or group of languages) which typologically was (were) comparable to Hebrew in its classical form. (1995, p. 156)

¹⁶ Gaulish, Lepontic and Celtiberian (now all extinct).

Of a more positively certain opinion is Theo Vennemann, who treated the works of Morris Jones, Pokorny, Wagner and Gensler as evidence of the fact that parts of the European Atlantic littoral were linguistically Hamito-Semitic (2001, p. 351).¹⁷ Vennemann's extensive theoretical framework comprised how Afro-Asiatic languages affected not only Celtic but also Germanic languages, including English and German, and his arguments included even archeological considerations. His collections of essays entitled *Europa Vasconica Europa Semitica* (2003) and *Germania Semitica* (2012) developed his theoretical standpoint about the substratal influence of Semitic languages on the Insular Celtic languages as well as their superstratal influence on Germanic languages. He wrote that "substrates mostly influence the structure of their contact languages (notably in the domains of phonology and syntax), while superstrates mostly influence the lexicon of their contact languages (notably in the fields of warfare, law and communal life)" (2003, p. 653) and claimed that stratal language contact had "more *structural* Semitic influence" in Celtic than in Germanic but "more *lexical* Semitic influence in Germanic than in Celtic"¹⁸ (2001, p. 351). He discussed a number of structural features, for example VSO word order, the verbal noun, the progressive aspect and the vigesimal counting system, as well as the etymology of a series of European toponyms and lexical items, and linked Mediterranean Hamito-Semitic ("Semitidic") and Vasconic prehistoric languages to Indo-European languages, in particular Insular Celtic and Germanic, claiming that

No-one with a minimum of knowledge of Indo-European and Semitic, looking at Irish or Welsh, can escape the observation that Insular Celtic is structurally much more similar to Arabic and Hebrew than to Indo-European, is indeed structurally nearly identical with those Semitic languages. (2012, p. 35)

Vennemann's methodology was reviewed by Baldi and Page, who stated that his "approach is risky because it involves not only a controversial theory, but is also dependent on elusive contact patterns involving languages with obscure histories" (2006, p. 2191).

The scholars that argued against the substrate hypothesis claimed that said hypothesis is, and can only remain, a hypothesis, mostly because of the lack of scientific evidence to its theoretical grounds. A thorough case/rationale against it was presented by Graham Isaac in his intervention at the XIII International Congress of Celtic Studies, where he firmly and categorically argued against it, in particular against Gensler's work, describing the arguments of the Afro-Asiatic and Insular Celtic (AA and IC) contact theory as "fallacious", although admitting that "the criticisms presented in this paper are harsh" (2008, p. 25 and 26 respectively). He first discussed each typological similarity presented by Gensler and argued against Gensler's claim that the structural features constitute any evidence of an Afro-Asiatic substrate to Insular Celtic languages, stating that

The AA/IC contact theory should consist of arguments that *demonstrate* the diagnosticity for that contact of the 'ensemble' of features, not of arguments that are formulated on the *assumption* of that diagnosticity. The rhetoric of the large 'ensemble' of features is what sustains belief in the theory. (2008, p. 43)

He then proceeded to address chronological and geographical issues of the substrate hypothesis, for, he claimed, it is not possible to postulate a contact between the two language families without taking into account where and when this contact has occurred. He systematically ruled out a number

¹⁷ "I soon learned that one part of this theory, that concerning Insular Celtic, had long been worked out by John Morris Jones (1900) and Julius Pokorny (1927-30), and a few years later I became acquainted with the work of Orin David Gensler (1993). This "Insular Celtic" part of the theory I am therefore no longer concerned with; it seems to me fully proved, to the extent that anything can ever be proved in the empirical sciences. As I have repeatedly said, the language-contact theoretical classification of Insular Celtic with Hamito-Semitic is as certain as its genetic classification with Indo-European." (Vennemann 2012, p. 36)

¹⁸ My own italicisation.

of what he terms “paths of contact”, also on the basis of linguistic evidence from Continental Celtic languages, and concluded that

It seems clear that the AA/IC contact theory fails to provide the possibility of a realist interpretation, by which I mean an interpretation that locates the languages in question in a geographical and chronological context which can be consistently confronted with extant data. (2008, p. 51)

A somewhat less “harsh” but equally argumentative view against the substrate theory was presented by Steve Hewitt in his *The question of a Hamito-Semitic substratum in Insular Celtic* (2009), which also provided a summary of the main contributors to the substrate hypothesis. He affirmed that “a major problem with the substratal explanation is the precise identity of the substratum” (2009, p. 991) because of influences traceable to a much too wide group of languages,¹⁹ and blamed the “scant attention” that the supporters of the substrate theory pay to typological explanations, warning against what he termed a “substratum frenzy” (2009, p. 991) and concluding that

For none of these prominent shared features is a substratal explanation demonstrably more plausible than a typological explanation or mere coincidence.

The existence of striking structural similarities between the Insular Celtic and the Hamito-Semitic languages is beyond question. However, the matter of whether this is to be attributed to substratal influence through prehistoric contact or typological tendencies and correlations remains unsolved (2009, p. 990.)

Hewitt’s early work compared Breton and Arabic, where he analysed a number of similarities between the two languages and concluded that “il est difficile de croire que la ressemblance en typologie ordinale entre les deux langues n’y soit pour rien”²⁰ (1985, p. 255), therefore pointing at the fact that the similarities have to be attributed to typological issues and are not merely coincidental.

Finally, also skeptical about the substrate hypothesis is Matasović, who discussed phonological and morphosyntactic developments of Insular Celtic, also in relation to Latin and early forms of British, within the frame of two competing theories about the genetic subclassification of the Celtic languages. He reached three historical explanations of said developments that, he claimed, are theoretically possible, the first of which states that:

There was a single substratum language on the British Isles, and IC acquired several common features from that substratum. That substratum may have belonged to the Afro-Asiatic family, or, far more likely, it may have shared some typological/areal features with languages of that family. However, this explanation seems rather unlikely, because there is no independent evidence for such a substratum. (2007, p. 108).

An overview of the background of this research field would not be exhaustive without an account of the relevant Arabic scholarship on the matter. However, I could not find any trace at all of research studies in Arabic related to linguistic similarities between Arabic and Celtic languages (or Scottish Gaelic) within the Arabic linguistic research field. I can only guess that the question is considered neither relevant nor of any particular interest for Arabic linguists.

I also guess that studies and pertinent research might indeed exist in Scottish Gaelic on the topic, but, unfortunately, I have no way of getting acquainted with them because, to my regret, I do not speak Scottish Gaelic.

¹⁹ The Afro-Asiatic influences consider not only Semitic languages (mostly analysed in the research are Hebrew and Arabic) but also Berber and Egyptian.

²⁰ “It is hard to believe that the resemblance in ordinal typology between the two languages has nothing to do with it”. Unless otherwise specified, all the translations are my own.

On a final note, it is important to mention that, although a few studies have been conducted on similarities with Hamito-Semitic languages for Welsh, Breton, and Irish (see above), my analysis is the only one available to date for Scottish Gaelic. Moreover, nothing seems to be written or researched so far about Manx, which is also a Goidelic language of the Insular Celtic family.

3. Research aims and materials

Due to the considerable diversity and variations in the lists of the similarities between Afro-Asiatic and Insular Celtic languages compiled by different scholars, I am compiling my own inventory of structural features to be examined. The features under investigation are the following:

- (a) conjugated prepositions
- (b) VSO word order
- (c) relative clauses: copying (and not gapping) strategy, resumptive pronouns
- (d) subject and object marking in verb
- (e) genitive construction, or construct state: head/dependent marking
- (f) non-agreement of verb with plural noun subject
- (g) the verbal noun, object in the genitive
- (h) circumstantial clause
- (i) numerals followed by the singular; the dual
- (j) prepositional expressions of possession/‘to have’
- (k) unmarked collective nouns and derived singulative

My inventory is compiled on the basis of those features that are relevant for Standard Arabic and that are listed as similarities in the above-mentioned scholars’ research works, in particular Gensler’s (2007) and Hewitt’s (1985 and 2009).

Each feature is presented and exemplified on the basis of *A reference grammar of Modern Standard Arabic* by K. C. Ryding (2005) for the Arabic and of *A descriptive grammar of Scottish Gaelic* by W. Lamb (2008).²¹ The choice of reference grammars as source material for the analysis has been dictated by necessity, since, as mentioned above, I do not speak Scottish Gaelic and therefore I would not be able to analyse other kinds of source material like text corpora. The two reference grammars constitute authoritative academic material, and their descriptive character allows a comparison between the two languages at the same linguistic level. Additional academic sources referred to are *Modern Written Arabic: A comprehensive grammar* by E. Badawi et al. (2015) and *Modern Arabic: Structures, functions, and varieties*, by C. Holes (2004) for Standard Arabic, and *Scottish Gaelic* by W. Gillies (2009), *The Celtic languages* by D. MacAulay (1992) and *A Gaelic grammar* by G. Calder (1923) for Scottish Gaelic. Other scholarly resources, such as academic articles and book chapters, complement the descriptions of Scottish Gaelic features where necessary.

²¹ In the Results section, they are referred to as Lamb and Ryding respectively, together with the relevant page number - the years of their publications (2008 and 2005 respectively) are omitted for the sake of brevity.

All examples, although glossed differently in the different sources,²² are re-glossed according to the Leipzig Glossing Rules (2015) and the guidelines for Interlinear Morphemic Glossing as presented in Lehmann (2004).²³

4. Comparison between Scottish Gaelic and Standard Arabic: selected features

In this section, each feature is presented first in Scottish Gaelic and then in Standard Arabic. A comparison follows between the two languages for each feature, also in relation to the literature.

(a) Conjugated prepositions

There are three classes of prepositions in Scottish Gaelic: simple, compound and complex. Simple prepositions mostly take the dative case²⁴ and can incorporate pronominal elements, which are then called ‘prepositional pronouns’. Prepositions can therefore be inflected for person, gender and number (Lamb, p. 224 and p. 226).

The following table shows how the simple prepositions *aig* ‘at’, *ann* ‘in’, *do* ‘for’/‘to’ and *ri* ‘to’/‘with’/‘against’ combine with the personal pronouns (Lamb, p. 226):²⁵

Preposition	1SG	2SG	3SG.M	3SG.F	1PL	2PL	3PL
<i>aig</i>	agam	agad	aige	aice	again	agaibh	aca
<i>ann</i>	annam	annad	ann	innte	annainn	annaibh	annta
<i>do</i>	dhomh	dhut	dha	dhi	dhuinn	dhuibh	dhiubh
<i>ri</i>	rium	riut	ris	rithe	rinn	ribh	riutha

Table 2 - Prepositions *aig*, *ann*, *do* and *ri* combined with personal pronouns, Scottish Gaelic

The following examples are taken from Ramchand (2005, p. 3 and p. 5 respectively):²⁶

(1)

Thug	mi	an	leabhar	dha
give.PST	1SG	DEF	book	to.3SG.M

‘I gave him the book’

²² Lamb (2008) does not gloss his examples according to the Leipzig Rules; Macaulay (1992), Gillies (2009) and Ryding do not gloss them at all. While I can gloss the Arabic examples myself as I speak Arabic, I can only to the best of my understanding re-gloss Lamb’s and gloss Macaulay’s and Gillies’s examples according to the Leipzig Rules, as I do not speak Scottish Gaelic.

²³ I will use the following abbreviations: the numbers 1, 2 and 3 refer to the first, second and third persons; ACC accusative; ADJ adjective; CONJ conjunction COP copula; DAT dative; DEF definite form; DEP dependent; DU dual; F feminine; GEN genitive; IND indicative; INDEF indefinite; M masculine; NOM nominative; OBJ object; PFV perfective PL plural; POSS possessive; PREP preposition; PROG progressive; PST past; REL relative; SBJ subject; SG singular; SUBJ subjunctive; VN verbal noun. A slash (/) indicates a possible alternative.

IPA transcriptions are between square brackets.

The transliteration system used for the Arabic is the IJMES (International Journal of Middle East Studies) Transliteration System.

²⁴ With a few exceptions, which take the nominative or the genitive (Lamb pp. 224-225)

²⁵ Lamb’s table reports a total of 16 prepositions, I have chosen these four because they are the same prepositions shown in the table for the possessive prepositionals, see below.

²⁶ The Scottish Gaelic reference grammars only report the full tables, without any example in context.

(2)

Tha peann agam
 be.PRS pen at.1SG
 ‘I have a pen’ (lit. ‘there is a pen at me’)

The following table shows that the same prepositions also combine with possessive pronouns (Lamb, p. 227):²⁷

Preposition	1SG	2SG	3SG.M	3SG.F	1PL	2PL	3PL
aig	gam	gad	ga	ga	gar	gur	gan/gam
ann	‘nam	‘nad	‘na	‘na	‘nar	‘nur	‘nan/‘nam
do	dhomh	dhut	dha	dhi	dhuinn	dhuibh	dhiubh
ri	rim	rid	ri	ri	ri ar	ri ur	rin/rim

Table 3 - Prepositions *aig*, *ann*, *do* and *ri* combined with possessive pronouns, Scottish Gaelic

Conjugated prepositions are a frequently researched topic in Scottish Gaelic, where they are also referred to as pronominal prepositions, conjugated prepositions and inflected preposition in the literature.²⁸

As for Standard Arabic, there are two kinds of prepositions: the prepositions proper and the semi-prepositions, or locative adverbs. Both are followed by the genitive case and both can combine with personal pronouns: “As objects of prepositions, the suffix pronouns attach directly onto the preposition itself.” (Ryding, p. 308 and p. 312).

The following tables show how the prepositions *bi* ‘with’/‘at’/‘to’, *min* ‘from’/‘than’ and the semipreposition ‘*inda* ‘at’ combine with the suffix pronouns²⁹ (Ryding, pp. 309-311):

Preposition	1SG	2SG.M	2SG.F	3SG.M	3SG.F
bi	b-ī	bi-ka	bi-ki	bi-hi	bi-hā
min	min-nī	min-ka	min-ki	min-hu	min-hā
‘inda	‘ind-ī	‘inda-ka	‘inda-ki	‘inda-hu	‘inda-hā

Table 4 - Prepositions *bi*, *min* and ‘*inda* combined with singular suffix pronouns, Standard Arabic

Preposition	1PL	2DU	2PL.M	2PL.F	3DU	3PL.M	3PL.F
bi	bi-nā	bi-kumā	bi-kum	bi-kunna	bi-humā	bi-hum	bi-hunna
min	min-nā	min-kumā	min-kum	min-kunna	min-humā	min-hum	min-hunna
‘inda	‘indanā	‘indakumā	‘inda-kum	‘inda-kunna	‘inda-humā	‘inda-hum	‘inda-hunna

Table 5 - Prepositions *bi*, *min* and ‘*inda* combined with dual and plural suffix pronouns, Standard Arabic

²⁷ For an example of how possessive pronouns work with prepositions, see Section 4 (d).

²⁸ See for ex. Stewart & Joseph (2009), Ramchand (2005) and Stalmaszczyk (2007).

²⁹ Standard Arabic has two sets of personal pronouns, i.e. subject pronouns and suffix pronouns, which work as object pronouns and possessives. Ryding explains that “there are two sets of suffix pronouns, one set indicates possession (possessive pronouns) and is suffixed to nouns, and the other set indicates the object of a verb or object of a preposition (object pronouns). Although the two sets are different in their distribution and in their meanings, in form they are almost exactly alike. The only formal difference between them is in the first person singular pronoun (‘my’ or ‘me’), which when it indicates possession and is suffixed to a noun, is /-ii/, but when it indicates the object of a verb is -nii” (p. 301). Because of this, they are treated as the same pronouns in this thesis - the difference for the 1SG is evident in the glossing.

The following examples are taken from Ryding (pp. 309, 310 and 399 respectively):³⁰

(3)

Ahlān	bi-ka
Welcome	to-2SG.M

‘Welcome to you’

(4)

Aḥsan	min-nī
Better	than-1SG

‘Better than me’

(5)

’Ind-ī	mushkilat-un
at-1SG	problem-NOM

‘I have a problem’ (lit. ‘at me is a problem’)

The feature of conjugated prepositions is reported by Hewitt as the “incorporation of a pronominal in the preposition” occurring in both Insular Celtic and Hamito-Semitic. Hewitt claims that it is a “commonplace process” and that “in Hamito-Semitic there is a single set of endings for prepositions, possessives and objects of verbs” (2009, p. 978). Hewitt also reports it as a feature shared by Breton and Arabic (1985, p. 238-239). Gensler also reported this feature as “found throughout Hamito-Semitic”, “found throughout Insular Celtic” and “unknown elsewhere in Indo-European” and mentions an Arabic example and an example in Old Irish (2007, pp. 175-176). Finally, Isaac claims that this feature, “while unfamiliar in Standard Average European”, is common to many languages in the world and specifically accounted for its existence in Hungarian, Tariana, Yimas and Bella Coola (2008 p. 27 and pp. 54-55).

(b) VSO word order

Scottish Gaelic is “basically a VSO language”: Lamb reports that “there is always an obligatory verbal element in the first position in Scottish Gaelic” and that the finite verb always comes first (pp. 228-229).

(6)

Chunnaic	Ealasaid	Dùghall
see.PST	Elisabeth.SBJ	Dugald.OBJ

‘Elisabeth saw Dugald’

Gillies also underscores the VSO feature when discussing word order in simple sentences, and states that “the standard order of elements in the Scottish Gaelic sentence is VSOAdv” (2009, p. 286), with the following example:

(7)

Chunnaic	mi	Iain	an-dè
see.PST	1SG	John.OBJ	yesterday

‘I saw John yesterday’

³⁰ More examples of prepositional pronominal constructions are in the following subsection (j) Prepositional expression of “to have”.

The verb comes first also in Standard Arabic: Ryding states that “if both the subject and the object of the verb are specified, the word order is usually Verb–Subject–Object (VSO). **This is the standard word order of verbal sentences in Arabic.**”³¹ (p. 64).

(8)

Fataḥ-a	karīm-un	fam-a-hu
open.PST-3SG.M	Karim-SBJ	mouth-OBJ-POSS.3SG.M

‘Karim opened his mouth’

There are exceptions to the VSO word order in both Scottish Gaelic and Standard Arabic. As for Scottish Gaelic, Lamb writes that “the initial verb is not always the predicating element. Depending on tense-aspect-modality parameters, it is sometimes the verbal noun which establishes lexical meaning while the initial verb, a sort of pro-verb or auxiliary, serves mainly to code tense, mood, and the absence or presence of negation” (p. 229). The same is reported by Macaulay, who writes that Scottish Gaelic is “taken to be typologically a VSO language” but that “this order holds in simple sentences” and that for more complex sentences or subordinate sentences other elements may precede the verb, such as in “aspectually marked sentences” (1992, p. 170). His example

(9)

Bha	Iain	a’	ceannach	an	leabhair
be.PST	Iain	PROG	buying.VN	DEF	book

‘Iain was buying the book’

is similar to the first of the following Lamb’s examples (p. 229), which show the difference between the ‘progressive past’ and ‘simple past’:

(10)

Bha	mi	a’	dol	dhan	bhùth(aidh)
be.PST	1SG	PROG	going.VN ³²	to.DEF	shop.DAT ³³

‘I was going to the shop’

(11)

Chaidh	mi	dhan	bhùth(aidh)
go.PST	1SG	to.DEF	shop.DAT

‘I went to the shop’

Lamb also notes that the verb can be preceded by “particles (or ‘sentence class markers (Macaulay 1992)) marking negation” (p. 299), like in the following example:

³¹ In bold in Ryding. Badawi et al. also write that “the basic pattern is verb + agent, with adverbial and other complements normally in third position [...] Arabic is thus a verb-agent-complement language (‘VSO’ in some conventions)” (2016, p. 390)

³² Lamb is not consistent in his glossing of the verbal noun, as he sometimes uses the infinitive form (‘go.vn’, p. 229) and some other times the gerund (‘drinking.vn’); I am using the gerund.

³³ This sentence is glossed as follows in Lamb (208, p. 229):

bha	mi	a’	dol	dhan	bhùth(aidh)
be-PAST	1S	PROG	go-VN	to-ART	shop-DAT

It is evident that *bha* is the past of the verb to be and therefore it should be glossed with a period (and not a dash, Lehmann 2004, p. 25).

(12)

Chan eil Ealasaid air Dùghall fhaicinn
 NEG be.PRS-DEP³⁴ Elisabeth.SBJ PFV Dugald.OBJ³⁵ seeing.VN
 ‘Elisabeth has not seen Dugald’ (lit. ‘Elisabeth is not after seeing Dugald’)

As for Standard Arabic, Ryding reports that the subject occasionally precedes the verb for stylistic reasons or for emphasis, or in newspaper headlines (pp. 66-67), for example:

(13)

Al-madīnat-u ta-mlik-u turāth-an islāmiyy-an
 DEF-city.F-SBJ.NOM 3SG.F-possess.PRS-IND heritage.M-OBJ.ACC islamic.M-ACC
 ‘The city possesses an Islamic heritage’

Another variation for Standard Arabic is the VOS: Ryding writes that “in some cases, the verb will come first, and the object will come before the subject of the verb. This is especially true if the object is substantially shorter than the subject” (p. 68):

(14)

Ḥaḍar-a al-liqā’-a ‘adad-un min aṣḥāb-i al-ikhtisāṣ-i
 attend.PST-3SG.M DEF-meeting-OBJ.ACC number-SBJ.NOM of members-GEN DEF-specialisation-GEN
 ‘A number of specialists attended the meeting’

Finally, any particle such as negation precedes the verb also in Standard Arabic:

(15)

Lā yu-ḥāwil-u al-khurūj-a
 NEG 3SG.M-try.PRS-IND DEF-leaving.VN-OBJ.ACC
 ‘He is not trying to leave’

The VSO word order is discussed by Hewitt as a “major”³⁶ shared feature between Arabic and Breton (1985), where he distinguishes between main clauses and subordinate clauses. He writes that “dans les propositions principales les deux langues ont deux ordres neutres, le breton VSO et SVO, l’arabe VSO [...]. Dans les subordinées, le breton a VSO [...]. L’arabe a aussi VSO dans les subordinées, sauf justement dans les complétives factuelles”³⁷ (1985, p. 232).

Hewitt also mentions VSO in his article about shared features by Insular Celtic and Hamito-Semitic in approximately the same way: he writes that “Arabic is normally considered to be VSO, although, as in Breton, SVO is a common alternative order, even from the Koranic period; SVO has gained prominence in modern times; certain styles of journalistic Arabic are reckoned to be more SVO than VSO” (2009, p. 978). Moreover, he reiterates his earlier conclusion about the word order for the subordinates in Arabic and writes that “‘Virtual’ complement clauses of the type ‘I want John to

³⁴ Scottish Gaelic verbs have three Forms, or Categories, termed Dependent, Independent and Relative. Although not typologically relevant per se, the three Forms are responsible for marking tense and aspect (Landgraf 2011). I am using the same glossing abbreviations as Lamb’s, i.e. DEP, INDEP and REL.

³⁵ Lamb glosses this sentence as follows:

chan eil Ealasaid air Dùghall fhaicinn
 NEG be-PRES-DEP Elisabeth.N PERF Dugald-N seeing-VN

I interpret *Dugald* as OBJ because of the translation, but according to his list of abbreviations (pp. 12-13) N stands for noun and its case is therefore unclear.

³⁶ “Une de ses préoccupations majeures” (Hewitt 1985, p. 224)

³⁷ “In the main clauses the two languages have two neutral orders, Breton VSO and SVO, Arabic VSO [...]. In the subordinate clauses, Breton has VSO [...]. Arabic also has VSO except for the factual complement clauses.”

come’ are obligatorily VSO in both Arabic and Breton, whereas ‘factual’ complement clauses, such as ‘I think John will come’ are obligatorily SVO in Arabic; traditionally they have been VSO in Breton but since the 18th century, an alternative SVO order has become increasingly frequent.” (2009, p. 987)

Hewitt’s distinction between VSO and SVO order in Arabic subordinate clauses and his numerous examples (1985, pp. 229-232) are interesting observations; however, what actually governs the VSO or the SVO in his examples of Arabic subordinate clauses is the particle that introduces them, i.e. *an* and *anna* (approx. translatable into ‘to’/‘that’), which must be followed by a verb and a noun respectively.³⁸ The following are two among Hewitt’s examples that show the difference of the subordinate structures (1985, p. 229):

(16)

A-zunn-u	an	katab-a	ḥasan-un	risālat-an
1SG-believe.PRS-IND	that	write.PST-3SG.M	Hassan-NOM	letter-ACC

‘I think that Hassan wrote a letter’

(17)

A-zunn-u	anna	ḥasan-ān	katab-a	risālat-an
1SG-believe.PRS-IND	that	Hassan-ACC	write.PST-3SG.M	letter-ACC

‘I think that Hassan wrote a letter’

The following examples about the two particles *an* and *anna* are taken from Ryding (p. 612 and p. 426 respectively):

(18)

Nu-ḥibb-u	an	na-ḡra’-a
1PL-like.PRS-IND	to	1PL-read-SUBJ

‘We like to read’ (lit. ‘we like that we read’)

(19)

Lā	a-zunn-u	anna	al	masraḥiyy-at-i	kān-at	radī’-at-an
NEG	1SG-believe.PRS-IND	that	DEF	play-PL-ACC	be.PST-3SG.F ³⁹	bad-SG.F-ACC

‘I do not think that the plays were bad’

Consequently, the distinction about the subordination is arguably not relevant in order to determine the typological word order for Standard Arabic, as it is governed by the subordinating particles.

VSO word order is not an exclusive feature of Hamito-Semitic and Celtic languages: WALS reports 95 languages in the world with VSO, 488 with SVO, 564 with SOV, and 25 languages with VOS.⁴⁰ Several authors mention VSO as one of the crucial shared features between Semitic and Celtic languages in relation to the substrate theory, although from different positions. Gensler claims that “VSO order is standard but not rigid in Egyptian, Berber and most old Semitic languages” (2007, p. 177). Jongeling underscores the fact that “VSO-language type is not so very common” (2000, p.

³⁸ See for ex. Ryding pp. 611-615 and pp. 425-426 respectively.

³⁹ In Standard Arabic, non-human plurals are treated as feminine singular: “agreement with nouns in the plural depends on whether the noun refers to human beings” (Ryding p. 125). This kind of agreement is often referred to as “deflected” (for ex. in Ferguson 1989; Hanitsch 2022; Owens 2021 as well as in Ryding, p. 125). Because deflected agreement is not relevant for the purposes of this thesis, the glossing does not show the number agreement on purpose, to avoid confusion.

⁴⁰ <https://wals.info/feature/81A#2/18.0/153.1>

149)⁴¹ and, despite this, we are still left “with the question why insular Celtic chose a way of development that is not in line with the general trend in the Indo-European languages, and which is, according to some authorities, one step back from the more logical basic word order SVO or SOV” (2000, p. 150). Matasović also underscores that “the VSO order is rare in Europe” and notices that “the Insular Celtic languages developed a rather rigid VSO order just at the time when Vulgar Latin tended towards a fixed SVO word order” (2007, p. 104).

In his argument against Gensler’s dissertation, Isaac writes that VSO “is superficially synchronically exotic for Indo-European” and that “the exoticism of IC VSO is exaggerated by the AA/IC contact theorists” (2008, pp. 36-37), reporting as evidence the occasional occurrence of VSO in other Indo-European languages of the Slavic group, such as Old Russian and Old Serbian (2008, p. 60).

Finally, Vennemann underscores the number of the structural similarities between Insular Celtic and Semitic, calling for an explanation for the VSO in Insular Celtic and he writes that

The number and specificity of shared properties far exceeds the range of natural concomitants of the VSO arrangement. Furthermore, what also needs explanation is the Insular Celtic VSO order itself; VSO is the basic order of ancient Hamito-Semitic but not of any of the Indo-European languages - except for Insular Celtic. (2012, p. 35)

(c) Relative clauses: copying (and not gapping) strategy, resumptive pronouns

Lamb reports that in Scottish Gaelic “relative clauses are a case of noun phrase subordination” and that they serve “to expand or modify the meaning of noun phrases rather than clauses. [...] Relative clauses always occur post nominally and are headed by the relativiser *a*” (Lamb p. 262).

The following example shows the “recovery strategy” of Scottish Gaelic, which is “to simply leave a gap (\emptyset) in the restrictive clause” (Lamb, p. 263)

(20)

Sin	an	duine	a	chunnaic	mi
that.COP	DEF	man	REL	see.PST	1SG

‘that’s the man who saw me’ or ‘that’s the man whom I saw’⁴²

More examples of the “relativiser-gap” strategy with a number of unglossed (yet literally translated) sentences show that only in the case of “possessors” a resumptive possessive pronoun is used (see sentence (26) below). He also notices that the tendency in obliques is “towards pied-piping + \emptyset ” (see (24)), but a relativizer-gap strategy is sometimes used in coordination with a resumptive prepositional pronoun (see (25)) (Lamb p. 263):⁴³

⁴¹ Jongeling cites Tomlin’s research results, who in his final sample of 402 languages found 9.2 % VSO languages, 41.8% SVO, 44.8% SOV and 3% VOS (1986, p. 22).

⁴² Lamb cites this example to illustrate the possibility of ambiguity in the grammatical relations (active vs passive) due to Scottish Gaelic’s VSO order and glosses the example as follows:

sin	an	duine	a	chunnaic	mi
that-(COP)	ART	man	REL	see-PAST	1S

The abbreviation COP is not listed in Lamb’s list of abbreviations (p. 12) but it is used to gloss the “defective copula *is*”. The reason why Lamb glosses COP between parenthesis is unclear. I am treating *sin* in the glossing of the following examples as ‘that is’, consistently with Lamb’s translations.

⁴³ I am glossing the following sentences on the basis of Lamb’s glossing of the previous sentence; my assumptions are between double square brackets.

(21)

sin an gille a tha bochd
 that.COP DEF boy REL COP⁴⁴ ill
 ‘that’s the boy who is ill’

(22)

sin an gille a chunnaic Ceit
 that.COP DEF boy REL saw Kate.NOM/ACC⁴⁵
 ‘that’s the boy who Kate saw’ (also ‘that’s the boy who saw Kate’)

(23)

sin an gille a thug an litir do Chèit
 that.COP DEF boy REL gave.PST DEF letter to Kate.DAT
 ‘that’s the boy who gave the letter to Kate’

(24)

sin an gille air an⁴⁶ do shuidh Ceit
 that.COP DEF boy [[on]] REL [[?]]⁴⁷ sit.PST Kate.NOM
 ‘that’s the boy on whom Kate sat’

(25)

sin an gille a shuidh Ceit air
 that.COP DEF boy REL sit.PST Kate on
 ‘that’s the boy who Kate sat on’

(26)

sin an gille a tha a mhàthair bochd
 that.COP DEF boy REL COP [[REL]] mother ill
 ‘that’s the boy whose mother is ill’ (lit. that’s the boy who his mother is ill)

The above reported by Lamb differs from what is reported by Gillies, who writes that the relative ‘direct’ (subject/object) pronoun is *a*, while (*s*)*an*⁴⁸ is used for ‘indirect’ (dative) relations, both irrespective of gender and number (the genitival relation ‘whose’ is expressed with “a variety of idioms”) (2007, p. 266). However, he states, “Scottish Gaelic uses the direct relative pronoun *a* asyntactically” and exemplifies this with the following (unglossed but literally translated) sentence, which besides showing the use of *a* (and not *an*) in a case of indirect/dative relation, points not at a gapping relativisation strategy but at a copying one:

⁴⁴ Lamb explains *tha* as second copula, used for “transient and/or superficial” relations and opposed to *is*, which instead has “long-lasting and/or inherent characteristics”. He reports that, although this distinction is “largely defunct”, it can still be detected in some cases (Lamb p. 245).

⁴⁵ Scottish Gaelic has four cases: nominative-accusative (thus called because there is no contrast between nominative and accusative case marking), dative and genitive (Lamb, p. 209).

⁴⁶ As noted below, the relativizer *a* is used for the ‘direct’ (subject/object) relation, while *an* is used for the indirect relation (Gillies 2009, p. 266)

⁴⁷ The prepositions *do* ‘for’/‘to’ and *air* ‘on’ are uninflected and are listed in the table of prepositions (Lamb 226). I could not find an explanation for the use of *do* here.

⁴⁸ “The *s*-element appears only after the prepositions *gu*, *ri*, *le* and (*ann*) *an*.” (Gillies 2007, p. 266)

(27)

Am fear a bha mi a' bruidhinn ris
 DEF man REL be.PST 1s PROG talking.VN to.3SG.M⁴⁹
 'The man to whom I was talking' (lit. 'the man who I was talking to him')

While the relativisation strategy in Scottish Gaelic, on the basis of what both Lamb and Gillies write, is somewhat unclear, the copying strategy of Standard Arabic is certain: "When a relative clause in Arabic refers back to a noun or noun phrase in the main clause which is the object of a verb or a preposition (e.g., "the book that we read," "the house that I lived in"), a pronoun must be inserted in the relative clause to serve as the object of the verb or preposition, referring back to the object noun in the main phrase." (Ryding p. 324). In Standard Arabic, relative pronouns are used only when the relative clause refers to a definite antecedent and they agree with it in gender and number. The following examples illustrate the resumptive pronouns in relative clauses, first with a definite antecedent (direct object first and oblique respectively) and then with an indefinite antecedent (Ryding pp. 324-325):

(28)

Al-makān-u alladhī ta-qṣid-u-hu hunā
 DEF-place.M-NOM REL.M.SG 2SG.M-possess.PRS-IND-OBJ.3SG.M here
 'The place which you seek (it) is here'

(29)

Fī-l-makān-i alladhī saqat-a fī-hi al-ṣārūkh-u
 at-DEF-place.M.SG-GEN REL.M.SG fall.PST-3SG.M in-3.SG.M DEF-rocket-NOM
 'At the place where the rocket fell (into it)'

(30)

Wa-qāl-a fī mu'tamar-in ṣiḥāfiyy-in 'aqad-a-hu ams
 and-say.PST-3SG.M in conference-M.GEN press.ADJ.M-GEN hold.PST-3SG.M-OBJ.3SG.M yesterday⁵⁰
 'He said in a press conference (which) he held (it) yesterday'

Hewitt notes the distinction in both Breton and Standard Arabic between a relative clause with a definite or an indefinite antecedent as a fundamental similarity between the two languages,⁵¹ but he does not mention anything specific about relativisation strategy and/or resumptive pronouns. However, among his examples comparing Breton and Standard Arabic, one sentence shows the occurrence of a resumptive pronoun in both languages, i.e. in the case of an oblique relativisation⁵² (1985, pp. 250-252).

⁴⁹ My guess at this glossing is based, besides on Gillies's literal translation, on the progressive aspect in Scottish Gaelic, which is periphrastically constructed with the particle *ag* or *a'* followed by the verbal noun (Lamb 237; Lamb glosses *a' bruidhinn* as PROG and speaking.VN respectively, p. 240) and on Lamb's table of prepositional pronouns (p. 226), where *ris* is listed as the reposition *ri* 'to/with' in the 3rd masculine singular.

⁵⁰ what the resumptive pronoun refers to becomes clearer in the gloss if we replace the noun *mu'tamar* 'conference', which is masculine, with the noun *muḥāḍara* 'lecture' which is feminine:

wa-qāl-a fī muḥāḍarat-in ṣiḥāfiyyat-in 'aqad-a-hā ams
 and-say.PST-3SG.M in lecture-F.GEN press.ADJ.F-GEN hold.PST-3SG.M-OBJ.3SG.F yesterday

⁵¹ Hewitt compares "la maison que je vois" (the house that I see) with "une maison que je vois" (a house that I see) and writes that "le point fondamental c'est que le breton est l'arabe distinguent tous les deux entre les relatives restrictives et non-restrictives" (1985, p. 252)

⁵² 'l'homme auquel j'achèterai une maison' (the man I'll buy a house from), the literal translation of which is reported as "l'homme pd j'achèterai une maison avec-lui" (lit. the man I'll buy a house with him, 80 B in Breton) and "l'homme celui fut.-j'achèterai maison de lui" (the man who I will buy a house from him)(80 A in Arabic)

Hewitt's list of features shared by Insular Celtic and Hamito-Semitic mentions relative clauses in two subsequent points. The first one deals with the relative pronoun, where he states that the syntactic status of the relativizer is "debatable", as it has been analysed by different authors in different ways - as an invariable relative clause linker and as a relative pronoun (2009, p. 981). In the specific cases of Scottish Gaelic and Standard Arabic, this difference in terminology also occurs, as Lamb terms the invariable *a* "a relativizer" (2008, p. 262) and Gillies differentiates between the invariable direct and indirect "relative pronouns" (2009, p. 266). A first main difference between the two languages is evident, since the relative pronoun in Scottish Gaelic is invariable, while in Standard Arabic it agrees in gender and number. Hewitt's second point about relative clauses concerns resumptive pronouns, a feature he terms "copying and not gapping" (2009, p. 981). He mentions the data available in WALS for the feature 'Relativisation on obliques', which, he says, point at "a heavy concentration of this strategy, apart from in Irish and Scottish Gaelic". For the sake of precision, it is important to remark that WALS actually shows a gap strategy for Irish and Scottish Gaelic in the case of the 'Relativisation of the subject' feature,⁵³ while it shows a pronoun-retention strategy for Irish and Scottish Gaelic for the 'Relativisation on obliques' feature.⁵⁴ In addition, WALS has no information about Standard Arabic for either feature, as the only Semitic languages it mentions are Egyptian Arabic (which is a vernacular, not to be mistaken with Egyptian, which is also Afro-Asiatic, but not Semitic), Hebrew, and Berber (which is not Semitic).

Finally, Gensler compares the "clause-initial relative particles" in Hamito-Semitic languages⁵⁵ with the clause-initial relative particles in Breton and Welsh.⁵⁶ He underscores that in Hamito-Semitic languages they are not relative pronouns in the sense of "relative markers whose inflection shows the relative noun's function within the embedded clause", and claims that "relative pronouns are unknown in Insular Celtic" (2007, p. 179). As for the relativisation strategy, Gensler remarks that relativisation by copying is standard in Semitic and Egyptian, where "a resumptive pronoun is required for oblique relatives, typically optional for object relatives, forbidden for subject relatives" (2007, p. 180). He states that the basic relativisation strategy in Welsh, Breton and Modern Irish is copying, and mentions resumptive pronouns as standard for oblique relatives, non-existent for subject relatives and "rare" vs. "fairly common" for object relatives, depending on positive vs. negative verbs respectively (2007, 181).

From all the above, my conclusion is that, although several examples in the literature show similar features with regard to relative clauses between some Semitic and some Insular Celtic languages, it is impossible to attest the same similarities between Scottish Gaelic and Arabic on the basis of what Lamb (2008) and Gillies (2009) report.

(d) Subject and object marking in verb

This feature is related to how the morphemes of subject and object are marked on the verb. In terms of *fusion*, i.e. the degree to which morphological markers attached to a host stem, Scottish Gaelic verbs are *isolating*, as subject and object pronouns stand alone as free morphemes ("Scottish Gaelic

⁵³ <https://wals.info/feature/122A#2/33.7/151.7>

⁵⁴ <https://wals.info/feature/123A#2/33.1/153.8>

⁵⁵ He reports that in Hebrew the particle is invariant, while in Arabic it agrees in gender and number (and case only in the dual)

⁵⁶ *a* in Breton; *a* and *y* in Welsh for direct (subject/object) and oblique relatives respectively. Gensler also mentions the "great complexity" of relative clauses in Old Irish, where at any rate "relative pronouns are never involved" (2007, p. 179)

is not pro-drop”, Adger 2007, p. 344).⁵⁷ In Standard Arabic instead the subject and object, if expressed with pronouns, are *concatenative* and attach, as prefixes and suffixes, to the host verb.

As for Scottish Gaelic, the following conjugation of the verb ‘strike/hit’ shows that the verb is “basically analytic, the distinctions of number and person being carried mainly by the subject” (Gillies 2009, p. 268):

	‘Present’(future)		‘Perfect’(past) ⁵⁸	
1 SG	buailidh	mi	bhuail	mi
2 SG	buailidh	tu, thu	bhuail	thu
3 SG	buailidh	e	bhuail	e
1 PL	buailidh	sinn	bhuail	sinn
2 PL	buailidh	sibh	bhuail	sibh
3 PL	buailidh	iad	bhuail	iad

Table 6 - Conjugation of the verb ‘strike/hit’ in ‘present’ and ‘past’, Scottish Gaelic

In Scottish Gaelic “only in the 2nd indefinite (‘conditional/habitual’) and imperative are person and number normally marked on the finite verb [...]. This occurs as a suffix attached directly to the verbal root”, as per the following paradigm of the imperative for the verb *cuir* ‘to put’ (Lamb p. 232):

<i>cuir</i>, imperative	translation
<i>cuirim</i>	let me put
<i>cuir</i>	you put
<i>cuireadh</i>	let him put
<i>cuireamaid</i>	let us put
<i>cuiribh</i>	let you (pl) put
<i>cuireadh</i>	let them put

Table 7 - Imperative of *cuir* ‘to put’, Scottish Gaelic

Lamb mentions a pronominal object only with non-finite verbs⁵⁹ and states that “when a verbal noun takes a pronominal object, it is incorporated in the form of a possessive prepositional pronoun” (Lamb p. 232). Lamb exemplifies this in the following sentence:

(31)
 Tha mi ga thuigsinn
 be.PRS 1S PROG.3S.POSS understanding.VN
 ‘I understand him/it’
 (lit. ‘I am at his/its understanding’)

⁵⁷ Calder writes that the verbs are not inflected and that the subjects are distinguished by the 1st, 2nd and 3rd personal pronouns “as nominatives immediately following the verb” (1923, p. 220).

⁵⁸ “The Gaelic verb inflects for tense: past future and conditional.” (Adger 2010, p. 287). The conjugation for all persons of the verb ‘to strike/to hit’ reported here is reported by Calder (1923, p. 220), who is the only Scottish Gaelic grammar that presents whole conjugations and who uses the term ‘present.’ for what Adger terms ‘future’ and ‘perfect’ what Adger calls ‘past’. In general, Calder uses a different terminology for the Scottish Gaelic verbs from the terminology used by modern texts such as Adger (2007), Lamb (2008), Gillies (2009) and Macaulay (1992), also when discussing the three forms of the verb, which, as noted above, are essential for the marking, together with clitics, of tense and aspect and which are, in the modern literature, referred to as ‘dependent’, ‘independent’, and ‘relative’.

⁵⁹ “There are two non-finite forms of the verb, the so-called verbal noun and the infinitive” (Macaulay 1992, p. 216). For the verbal noun, see (g) below.

Lamb explains *ga* as the fusion of “*aig* ‘at’ + *a* ‘his/its’” and reports the whole chart of all the pronominal objects as follows:⁶⁰

Conjugated preposition <i>aig</i>	Verbal noun ‘understanding’	Pronominal object of the verbal noun ‘understanding’
gam	thuigsinn	me
gad	thuigsinn	you (sing)
ga	thuigsinn	him
ga	tuigsinn	her
gar	tuigsinn	us
gur	tuigsinn	you (pl)
gan	tuigsinn	them

Table 8 - Conjugated preposition *aig* and possessive pronouns with verbal noun, Scottish Gaelic

There is no mention in Lamb (2008) or Macaulay (1992) of how Scottish Gaelic marks the object with a finite verb. Only Gillies mentions ‘Personal pronouns as subject or object of verb’, but only to report a chart which distinguishes between ‘non’ contrastive’ and ‘contrastive’ forms⁶¹ (2009, p. 264).⁶²

Standard Arabic is pro-drop and the verbs have two tenses, the past and the present: “the past tense is formed by suffixing person-markers to the past tense verb stem. The person markers in the past tense also denote number (singular, dual, plural) and gender” (Ryding p. 443); “the present tense is formed from the present tense stem of a verb, to which both a prefix and a suffix are added. [...] The prefixes are subject markers of person while the suffixes show mood and number. In MSA, thirteen present tense inflectional forms are used. [...] The prefix and suffix together give the full meaning of the verb.” (Ryding p. 441).

The following table reports the conjugation of the verb ‘to write’ in the past and in the present indicative (Ryding p. 443 and p. 441):⁶³

⁶⁰ See also Table 2 in Section 4 (a).

⁶¹ “Personal pronouns as subject or object of verb [...] may occur with or without the contrastive force imparted by the deictic suffixes *-sal/-se/-san*”. (Gillies 2009, p. 264). This distinction does not appear to be relevant for the topic under discussion, therefore the chart is not reported here.

⁶² In his article *Pronouns postpose in PF* (2007) Adger discusses the phenomenon of weak pronoun postposing in Irish and Scottish Gaelic and he states that such phenomenon “is unusual in that it involves the rightward placement of a prosodically and informationally light element” (2007, p. 343). He exemplifies this in Scottish Gaelic with the following two answers (the first *incorrect, the second the required one) to the question “Did you see the accident?” as follows:

*Chunnaic an de` i.
saw yesterday it-FEM
'I saw it yesterday.'
Chunnaic an de`.
saw yesterday
'I saw it yesterday.'

Since Scottish Gaelic is not pro-drop and because Adger’s article deals with pronominal ellipsis, his glossing does not show what happens to the pronominal subject and therefore is not explicative enough for the topic under discussion.

⁶³ Like most Semitic languages, Standard Arabic is morphologically based on a consonantal root system and a series of patterns of affixes. For the verb ‘to write’ the three consonants are *k-t-b*, which result in the stems *katab* and *ktub* for the past and the present respectively.

	write, past	write, present indicative
1SG	katab-tu	'a-ktub-u
2SG M	katab-ta	ta-ktub-u
2SG F	katab-ti	ta-ktub-īna
3SG M	katab-a	ya-ktub-u
3SG F	katab-at	ta-ktub-u
1PL	katab-nā	na-ktub-u
2DU	katab-tumā	ta-ktub-ān
2PL M	katab-tum	ta-ktub-ūn
2PL F	katab-tunna	ta-ktub-na
3DU M	katab-ā	ya-ktub-ān
3DU F	katab-tā	ta-ktub-ān
3PL M	katab-ū	ya-ktub-ūn
3PL F	katab-na	ya-ktub-na

Table 9 - Conjugation of 'to write' in the past and in the present indicative, Standard Arabic

Object pronouns are also marked in the verb by suffixation. The following examples show subject and object marking for both past and present (Ryding p. 305):

(32)

Wajad-tu-hā
find.PST-1SG-OBJ.3SG.F
'I found it'

(33)

'A-shkur-u-ka
1SG-thank.PRS-IND-OBJ.2SG.M
'I thank you'

Isaac reports the feature of 'polypersonal verb' as "atypical for Indo-European and SAE⁶⁴ (but cf. Basque) but otherwise common for verbal systems of inflexional, agglutinative and polysynthetic types throughout the world" and writes that "it is so common that it appears to me futile to give even token examples. [...] It is clearly a typological commonplace." (2008, p. 28). What Isaac writes therefore highlights the occurrence of the feature in Standard Arabic, which is an agglutinative, synthetic, fusional language but it does leave the question open in the case of Scottish Gaelic, although Scottish Gaelic is a "largely fusional language as seen, for example, in its large proliferation of pronominal forms. [...] Its verbal system is less fusional than French or Spanish but approximates that level in some cases" (Lamb p. 202).⁶⁵

Hewitt reports that subject and object marking in the verb occurs in both Insular Celtic and Semitic and writes that "object pronouns are traditionally proclitic in Celtic and postclitic in Semitic" (2009, p. 981). Gensler also states that "Semitic and Berber can mark pronominal object as well as subject. He specifies that "Semitic object markers are exclusively suffixing" (2007, p. 183), while both Old Irish and Welsh "standardly mark pronominal object as well as subject (2007, p. 184). However, there is no evidence in the Scottish Gaelic reference grammars of both subject and object marking on verb. While, as noted above, personal pronouns in Scottish Gaelic are amply researched when

⁶⁴ Standard Average European (Isaac 2008, p. 27)

⁶⁵ Lamb writes that mentions "the 2nd indefinite (also known as the 'conditional/habitual'), certain passive forms, and the subjunctive/imperative are the only verb forms exhibiting synthesis in Modern Scottish Gaelic" (Lamb, p. 202). About Scottish Gaelic, Lamb also writes that "the verbal system tends to be agglutinative while the nominal system is somewhat fusional." (<https://old.linguistlist.org/issues/13/13-2887.html>)

combined with prepositions (see (a) above), they do not seem to be relevant when they are used for the direct object in a sentence.

Because of the above therefore, it is not possible to state that similarity of the feature exists for Scottish Gaelic and Standard Arabic.

(e) Genitive construction / construct state: head/dependent marking

This feature concerns how Scottish Gaelic and Standard Arabic mark the head and the argument in a nominal phrase in terms of case and word order.

In Scottish Gaelic the head comes before the dependent, which is marked in the genitive. Lamb writes that “Scottish Gaelic is a dependent-marking language, seen in the way it treats case marking” (p. 204) and exemplifies this as follows:

(34)
 Bùth Dhòmhnail
 shop Donald.GEN
 ‘Donald’s shop’

Lamb mentions that a “genitival construction” is sometimes used “in cases where the possessor of an inalienable is fully specified”, such as in the following example:

(35)
 Taigh Theàrlaich
 house.DEF Charles.GEN
 ‘Charles’ house’

Lamb is very succinct on the topic and only points out that in Scottish Gaelic “it is not the heads of these dependent relations which exhibit morphological marking, but rather the dependent element. This is signified by lenition and palatalisation in the first example and lenition only, in the second.” (Lamb p. 205).⁶⁶ More information about the head/dependent marking is found in Gillies, who provides an example that also underscores the fixed order of the elements and explains that “the article is deleted before a definite head noun qualified by a definite dependent noun” (Gillies 2009, p. 278).

⁶⁶ As noted above in Section 2.1, Scottish Gaelic, like most Celtic languages, is characterised by a number of morphophonological mutations that affect morphology and syntax. The following chart of the declension of the nouns *balach* ([baLəx] m., ‘boy’) and *caileag* ([kalag] f., ‘girl’) highlights the role of the initial and final morphophonological mutations, i.e. lenition and palatalisation (the IPA transcriptions are within square brackets and only show the phonetic features that are relevant for the case marking) (from Macaulay 1992, p. 210):

balach	balaich	balach	balach	bhalaich	bhalach
[baLəx]	bal[iç]	[baLəx]	[baLəx]	[v]al[iç]	[v]ala[x]
INDEF.NOM/ACC	INDEF.GEN	INDEF.DAT	DEF.NOM/ACC	DEF.GEN	DEF.DAT
‘boy’					
caileag	caileige	caileag	chaileag	caileige	chaileig
[kalag]	[k]ail[ɛgʲə]	[kalag]	[x]ail[ak]	[k]ail[ɛgʲə]	[x]ail[eg]
INDEF.NOM/ACC	INDEF.GEN	INDEF.DAT	DEF.NOM/ACC	DEF.GEN	DEF.DAT
‘girl’					

(36)

Ceann	an	duine
head.DEF	of.DEF	man.GEN'
'the head	of the	man
(the) head noun	(article)	dependent noun

Also in Standard Arabic the head precedes the dependent, which is marked in the genitive. Actually, "the noun-noun genitive construction is one of the most basic structures" of the language. The first noun has no definite article because it is defined through the second term and, as the head noun of the phrase, carries the case marking, depending on the construction's function in the sentence. The second noun, or dependent, is marked either for definiteness or indefiniteness and determines the definiteness or indefiniteness of the entire phrase, and is always in the genitive case (Ryding p. 205 and p. 211).⁶⁷

The following examples are taken from Ryding (p. 206, p. 211) and show the head in the nominative and in the accusative with the dependent always in the genitive:

(37)

Wazīr-u	al	'adl-i
minister-NOM.DEF	DEF	justice-GEN.DEF
'The minister of justice'		

(38)

Ḥaḍar-a	ḥaflat-a	waḍ'-i	al	hajr-i	al	isās-i
attend.PST-3SG.M	party-ACC.DEF	laying.VN-GEN.DEF	DEF	stone-GEN.DEF	DEF	main-GEN.DEF
'He attended the party for the laying of the cornerstone'						

The above example points at a main difference between the structure in Standard Arabic and Scottish Gaelic, i.e. when the construction has more than one dependents: while in Standard Arabic all the dependents take the genitive, Gillies reports that in Scottish Gaelic "complex 'Noun dominating Noun' phrases also involve a genitive suppression rule whereby only the last noun in the chain is permitted to go into the genitive" (2009, p. 279). His examples are the following:

(39)

Làmh	an	dorus
handle.DEF.NOM	of.DEF	door.DEF.GEN
('The handle of the door')		
The door handle		

(40)

Làmh	dorus	an	taighe
handle.DEF.NOM	door.DEF.NOM	of.DEF	house.DEF.GEN
('The handle of the door of the house')			
The door handle of the house			

⁶⁷ The noun-noun genitive construction, or construct state (or *idāfa*), is "very wide-ranging" (Ryding p. 206) and the semantic relationships between the nouns can be classified in different ways. Ryding distinguished eleven general categories (pp. 206-211) and lists several examples for each of them - I am only reporting a couple of some representative ones.

(41)

Làmh dorus taigh na mnatha⁶⁸
 handle.DEF.NOM door.DEF.NOM house.DEF.NOM of.DEF woman.DEF.GEN

(‘The handle of the door of the house of the woman’)

The door handle of the woman’s house

(42)

Làmh dorus taigh bean Sheumais
 handle.DEF.NOM door.DEF.NOM house.DEF.NOM wife.DEF.NOM James.DEF.GEN

(‘The handle of the door of the house of the wife of James’)

The door handle of James’s wife’s house

Hewitt reviews the genitive construction typologically and mentions the following four parameters of its typology: the order of head and dependent, the presence or absence of an article, where the relation marking occurs (on head or dependent) and a limited number of relator mechanisms, such as adjacency, phonetic modification of head or dependent, case marking, possessive, link particles and adposition (2009, p. 982). Hewitt also reports that the genitive construction is basically identical in Standard Arabic and Breton, with only the dependent taking the definite article, and he extensively exemplifies the head/dependent relation in Breton where more than one dependents and the position of the adjective make the head/dependent relationship relying on adjacency as relator mechanism, since Breton has no case (1985, p. 242-245). He observes a number of differences in the genitive construction between Insular Celtic and Hamito-Semitic languages that mark the case and those that do not, in particular the role of the definite article, and concludes that “it is only with the loss of the case endings that the [H [the-D]] structure becomes crucial to defining the genitive construction.”⁶⁹

Gensler also reports the juxtaposition of two nouns in the order head-dependent as a genitive construction (head-dependent.GEN) in both Semitic and Insular Celtic and discusses the position of the definite article - on the dependent, for both Semitic and Insular Celtic - but he states that “in general, however, the rule in Celtic lacks the rigidity of Semitic” and mentions a few cases in Irish and Welsh where both the head and the dependent take the article.⁷⁰

⁶⁸ ‘woman’/‘wife’ is an irregular noun: *bean* in the nominative, *mnatha* in the genitive (Gillies 2009, p. 279).

⁶⁹ Hewitt also reviews the construct state of adjective-nouns compounds, such as in ‘a pure-hearted man’ vs ‘the pure-hearted man, and writes that “the construct is formed with a possessive in Celtic, but has the form of a normal construct state in Semitic” (2009, p. 988). Scottish Gaelic realises possession in a number of ways - with genitive constructions as well as locative constructions, depending on the alienable/inalienable contrast (Lamb 212-213). Because of all this, and because such constructions are treated as “false or unreal *iDāfa*” (improper annexations, Ryding p. 221) in Standard Arabic, this feature is not examined in this thesis.

⁷⁰ The “idiomatic genitive kinship constructions”, or “abstract or metaphorical use of kin terms: “son/father of Noun”, very common in Arabic and listed as shared features in Hewitt 2009 and Gensler 2007 respectively, are not discussed in this thesis as a shared feature because from a grammatical point of view they are the same genitive constructions reviewed above. What makes them stand out is just their lexical character, as they have “special nonliteral semantics: ‘KIN of Noun’, in the meaning “person/thing characterized by some essential connection with Noun” (Gensler 2007, p. 204). Among Gensler’s examples is the Arabic *ibn al-sabīl*, literally ‘son of the road’, which comes to mean ‘traveller’ (2007, p. 203); Hewitt cites ‘*abu chegāyir*’ in Iraqi Arabic, literally ‘father of cigarettes’ with the meaning ‘cigarette seller’. While both Hewitt and Gensler report this feature in Irish (2009, p. 985 and 2007, p. 204 respectively), there is no mention of this feature in Lamb. Gillies reports some instances in Scottish Gaelic with the noun *mac* (‘son’), for example *mac aig Iain*, lit. ‘a son of Iain’, and *is mise mac a mhinisteir*, ‘I am the minister’s son’ (2009, p. 279 and p. 288 respectively), but in neither case has the construction particular semantic significance like in Arabic.

Because of all the above, my conclusion is that the genitive construction, or rather the order of the noun preceding the genitive, appears to be a shared feature by Scottish Gaelic and Standard Arabic, although there are some syntactical differences in the case of multiple dependents.

(f) Non-agreement of verb with plural noun subject

There is no mention of this feature for Scottish Gaelic in Lamb, in Gillies (2009) or Macaulay (1992). One reason may be the fact that, as already noted, Scottish Gaelic is not pro-drop and the verb, with a few exceptions cited above from Lamb, is usually not marked for person and number.

As for Standard Arabic, the verb preceding a subject noun in the dual or plural agrees in gender but not in number: “if the subject is plural or dual, and it follows the verb, the verb inflects only for gender agreement, and not number agreement. The verb remains singular.” (Ryding p. 65), as in the following example:

(43)
 Ḍaḥik-a al ṭullāb-u
 laugh.PST-3SG.M DEF student.PL.M-NOM
 ‘The students laughed’

Hewitt notes that “non-agreement is fairly common with VS order worldwide” and mentions the occurrence of this feature in Welsh and Breton for the Insular Celtic and in Egyptian, Classical Arabic as well as, to some extent, in Biblical Hebrew (2009, p. 983). In his article about Breton and Arabic, he presents a number of examples comparing them and states that “en breton, le verbe a une seule forme sans accord de personne ou de nombre dans les propositions VSO” and that “en arabe en VSO il y a accord du genre seulement”⁷¹ (1985, pp. 234-235). Hewitt also claims that “non-agreement appears to be even more recent in Gaelic; indeed in some dialects [...] there is often still agreement.” (2009, p. 983), but he does not cite any source and, as mentioned above, there is no trace of the feature in the grammars.

The non-agreement in number of verb and subject in Arabic is also brought up by Gensler, who reports the standard singular third person form in Welsh and Breton when the verb precedes the subject; he also notes, like Hewitt, that the feature is common among VSO languages (2007, p. 190).

From all the above, and especially because of the lack of evidence in the grammars, my conclusion is that this is not a shared feature by Scottish Gaelic and Standard Arabic.

(g) The verbal noun, object in the genitive

Gillies explains the verbal noun (or ‘verb-noun’) as a noun that signifies the verb in all respects and that can “subject to certain restrictions, be used as a noun. [...] It is most frequently used in conjunction with other verbs, especially the verb *tha* ‘is’, to express progressive action and other aspectual nuances” (2009, pp. 273-274).

⁷¹ “In Breton, the verb has only one form and does not agree in person or number in VSO sentences; in Arabic in VSO there is only agreement in gender”.

Lamb writes that the verbal noun in Scottish Gaelic “can function both as a noun and as a lexical verb. Its distribution, rather than morphology, is the only clue to its function” (p. 230). Among his examples are the following:

(44)
 Tha e ag òl fiona
 be.PRS 3SG.M PROG drinking.VN wine.GEN
 ‘He is drinking wine’

(45)
 Tha òl fiona ga mharbhadh
 be.PRS drinking.VN wine.GEN PROG.3SG.M.POSS killing.VN
 ‘Wine drinking is killing him’

Lamb writes that “perhaps the best way to conceptualise the verbal noun, in essence, is as a noun which is: not timestable in the way other nouns are; which can serve as a complement to another VN [...]; and also be dominated by a small set of prepositions which convey aspectual meaning” (p. 231).

As for Standard Arabic, the verbal noun (*maṣḍar*) “names the action denoted by its corresponding verb” (Ryding, p. 75), as in the following examples of genitive constructions (see Section 4 (e)), where the verbal noun is marked for case according to its function in the sentence (Ryding, p. 80).

(46)
 Ḥāwal-at kasr-a al taqlīd-i
 try.PST-3SG.F breaking.VN-ACC DEF tradition-GEN
 ‘She tried to break/breaking tradition’

(47)
 Ziyṡārat-u al qaṣr-i
 visiting.VN-NOM DEF castle-GEN
 ‘Visiting the castle’

However, the verbal noun of a transitive verb can, in some cases, be followed by the accusative,⁷² like in the following example (Ryding, p. 81):

(48)
 Qabla muḡhādarat-i-hi al ‘āṣimat-a
 before leaving.VN-GEN-POSS.3SG.M DEF capital-ACC
 ‘Before his leaving the capital’

Verbal nouns are typically defined as “forms which derive systematically from verbs but whose syntax is like that of nouns” (Matthews 2014). More precisely, Hewitt reports that “there appears to be more of a cline than a sharp distinction between the abstract verbal noun (Arabic, Georgian *masdar*) and the infinitive. The criterion for distinguishing between the two is whether objects are in the genitive (verbal noun) or accusative (infinitive)” and states that “in Insular Celtic, only the

⁷² The specific grammatical conditions regulating such special instances for the verbal noun in Standard Arabic are related, among other factors, to the type of verb from which the verbal noun is derived from and to its use together with possessive pronouns. They are accounted for in Ryding (pp. 81-83) and they are not exemplified here, as they are not relevant for the purpose of identifying a similarity of the verbal noun feature for the two languages.

Irish verbal noun seems truly *masdar*-like". (2009, pp. 983-984). Gensler also distinguishes between the two, accounting for the similarity between Insular Celtic and Semitic under the title "verbal noun (obj in genitive) rather than infinitive (obj in accusative)" (2007, p. 191) and states his position as follows: "I am (perhaps somewhat arbitrarily) taking the difference between genitive and accusative rection of the object as criterial for the concepts "verbal noun" and "infinitive" (2007, p. 193). Gensler notices that "the semitic languages vary"; however, he writes that "Arabic has a verbal noun", therefore ignoring the special circumstances of the accusative following the verbal noun overviewed by Ryding mentioned above (2007, p. 191). Gensler also states that "Insular Celtic has verbal nouns, with the object appearing as a normal genitive" (2007, p. 191) and mentions its use in Irish and Welsh, which treat the object of the verbal noun with the genitive and with a preposition respectively.⁷³

With Hewitt's distinction in mind, I can only draw the conclusion that the verbal noun is indeed a shared feature by Scottish Gaelic and Standard Arabic, but whether there is a difference in how much more "*masdar*-like" it is in Scottish Gaelic or in Standard Arabic remains to be determined. As noted above, the verbal noun in Standard Arabic can also, in particular cases, be followed by the accusative, while neither Lamb (2008) nor Gillies (2009) nor Macaulay (1992) mention the possibility of the accusative in Scottish Gaelic. However, in her article *Aspect Phrase in Modern Scottish Gaelic*, Ramchand overviews the use of the verbal noun in periphrastic constructions to mark aspect and she specifically exemplifies the use of the accusative pronoun as the object of a verbal noun, declaring it "completely ungrammatical in SGaelic (although grammatical in Irish)" (1993a, p. 10). In her other article *Verbal Nouns and Event Structure in Scottish Gaelic*, Ramchand discusses in particular the use of the verbal noun in periphrastic constructions, where the verbal noun takes different positions in the sentence. Here she states that "the periphrastic construction in SGaelic has been the subject of some controversy in the Celtic grammatical tradition. The main issue has been the status of the verbal noun in such constructions, and whether it should be thought of as a noun or a verb" (1993b, p. 163). She writes that

the post-posed genitive object is associated with the atelic constructions, whereas the telic constructions have pre-posed direct marked objects. Moreover, the direct case marked objects appear to have specific readings, and, for the appropriate kind of predicate, completely affected interpretations. The genitive marked objects on the other hand, tend to be non-specific or not completely affected" (1993b, p. 172).

Arguably, what Ramchand reports makes the verbal noun in Scottish Gaelic definitely similar to the verbal noun in Standard Arabic, not because of which grammatical or syntactical instances govern which case follows it, but instead on a more general, rule/exception level governing the case marking of the object of a "typical" verbal noun, as opposed to the infinitive in the terms of Gensler's distinction. Finally, it is also important to underscore that the term *maṣḍar*, used by Hewitt (2009) is actually an Arabic word (it also means 'source') and it "refers to its essential nature as the name of an activity or state" (Ryding p. 75). In fact, the verbal noun in Arabic is sometimes used to lexically refer to a verb, since the citation form of the verb is the finite verb, inflected in the third person masculine singular past tense - Arabic has no infinitive or gerund forms.

(h) Circumstantial clause

Lamb reports that in Scottish Gaelic "small clauses in progressive aspect are frequently associated with a type of clause combination known as cosubordination, which in simple terms shares some features with subordination and others with coordination. Although the clause linkage marker is a

⁷³ Welsh does not inflect for case, Irish does. (Gensler 2007, p. 191).

conjunction, the interpretation is temporal and the semantic bond between the two clauses is tighter than it would be in a case of coordination” (p. 250). His first example is the following:

(49)

Chunnaic mi Ceit agus i a pogadh Phoil
 see.PST 1SG Kate CONJ 3SG.F PROG kissing.VN Paul.GEN
 'I saw Kate while she was kissing Paul'
 (lit. 'I saw Kate and she at the kissing of Paul')

Lamb states that these cosubordination constructions “have more than a passing resemblance to both coordination and subordination. They share with the former the overt expression of a conjunction (*agus*), although semantically they can resemble a relative clause or an adverbial adjunct” (p. 263). His several examples that follow cover what he calls different “types” of cosubordination. He writes that the issue with the analysis of these clauses as coordinate “is that they are not finite, yet like coordinate clauses, they cannot be clefted or fronted”; because of this as well as because of “other syntactic evidence” they cannot be regarded as subordinate either (p. 264). The following two examples represent the ‘Participle Type’ and the ‘Reason type’.⁷⁴

(50)

Dh’fhalbh Alasdair 's an t-acras a' tighinn air
 leave.PST Alastair CONJ DEF anger PROG coming.VN on.3SG.M
 ‘Alasdair left with hunger coming on him’⁷⁵

(51)

Dh’fhalbh Alasdair agus i na suain
 leave.PST Alastair CONJ 3SG.F in.3SG.F slumber
 'Alasdair left because she was fast asleep'
 (lit. ' ... and she in her slumber')

As for Standard Arabic, the circumstantial clause⁷⁶ describe the circumstances “in which the agent or patient found themselves at the time of the action described in the main verb” (Holes 2004, p. 266). Ryding specifies that for this purpose the connecting particle *wa* is used, “followed by a pronoun and a clause describing the circumstances”, as in the following examples (pp. 284-285):

(52)

Wa-fūji'-a wa huwa ya-qṭa'-u al ḥaṭab-a
 and-surprise.PST.PASS-3SG.M CONJ 3SG.M 3SG-cut.PRS-IND DEF wood-ACC
 ‘He was surprised while he was cutting wood’

⁷⁴ Lamb’s examples of ‘Participle Type’, ‘Reason Type’, ‘Relative Type’ and ‘Temporal Type’ (pp. 263-264) are followed by the same sentences reformulated differently in order to constitute cases of either coordination or subordination. Unfortunately the reformulated sentences in Scottish Gaelic are only translated into English and not glossed: for example the ‘Participle Type’, with coordination, is *dh’fhalbh Alasdair’s bha an t-acras a’ tighinn air* (‘Alasdair left and hunger was coming on him’) and the ‘Reason Type’, subordinate, is *dh’fhalbh ea chionn ’s gun robh i ’na suain* (‘he left because she was fast asleep’). An attempt to gloss them myself would imply a fair amount of (possibly inexact) guesswork, therefore I choose not to report them here.

⁷⁵ For how this sentence should be formulated in the English translation as ‘Alasdair left while he was hungry’ or ‘Alasdair left while getting hungry’, see the previous footnote.

⁷⁶ “ḥāl clause with waw” in Ryding (p. 284); “circumstantial clause” in Holes (2004, p. 266)

(53)

Dakhal-ā wa humā ya-rtadī-ān ziyy-an islamiyy-an
 enter.PST-3DU.M CONJ 3DU.M 3DU-wear.PRS-IND.M garb.M-ACC islamic.M-ACC
 ‘The two of them entered wearing Islamic garb’

Hewitt discusses this feature for Breton and Arabic (1985, pp. 254-255) and describes it as “typical of both Insular Celtic and Hamito-Semitic”, highlighting the fact that “the construction is syntactically coordinate (in both Celtic and Semitic, the order after ‘and’ is always SVO) but semantically subordinate” (2009, pp. 984-985). Gensler terms this construction as “adverb clauses of accompanying circumstance” and also reports it as shared by both Celtic and Semitic. He notes that the nominal clause following ‘and’ can, in Arabic and Hebrew, lack a verb entirely or have the verb in a non-finite form, while in Welsh and Irish the verb cannot be finite and he states that “the Celtic and Semitic constructions are almost exact parallels”, noting the correspondence between the use of a participle in the circumstantial clause in Semitic⁷⁷ and the construction ‘preposition + verbal noun’ in Celtic. (2007, pp. 198-200). Interestingly, Vennemann discusses the “subordinating *and*” extensively within the theoretical framework of features shared by “Semitic, Celtic and Celtic Englishes” (2012, pp. 189-190), with a number of examples in Irish, Arabic and old Semitic languages. Vennemann is the only author reporting the feature also in Scottish Gaelic, stating that “that subordinating ‘and’ is a feature not just of Modern Irish but also of the older stages of the language is likely enough in view of the fact that the same feature occurs in all varieties of Insular Celtic, namely not only in Irish and Scottish Gaelic but also in Manx, Welsh, Cornish, and Breton” (2012, p. 193).

In view of the above, I can only draw the conclusion that the syntax of the circumstantial clause is indeed a shared feature by Scottish Gaelic and Standard Arabic.

(i) Numerals: followed by the singular; the dual

Lamb writes that Scottish Gaelic is one of the few languages that use a vigesimal system⁷⁸ but dedicates only what he calls a “cursory treatment” (p. 218) to the numerals in Scottish Gaelic. His charts show the numbers from 1 to 1,000,000 followed by the noun ‘dog’, with the noun for ‘dog’ spelt in different ways with different numbers: *chù* with the numbers 1, 2, 11, 12, 21, 22; *cù* with the number 20, 40, 50, 99, 100, 200, 1000 and 1000k; *coin* with 3 to 10, 13 to 19 as well as 23-39. While the pattern of the form of the nouns that follow the numbers is quite evident, Lamb only states that some numbers “also take the singular forms of a noun, notably 1, 2, and 20 and multiples of 20 and 100” - which points at *cù* and *chù* being the noun in the singular and *coin* in the plural - but he does not mention if the noun is marked for any particular case.⁷⁹

Standard Arabic has a complex numeral system: Ryding dedicates to it the whole chapter 15, where she outlines its general structure in terms of morphology and syntax and illustrates it extensively with numerous examples. She writes that

⁷⁷ Ryding’s examples all have a finite verb in the circumstantial clause; Gensler also reports the following example with an active participle:

qām-a zayd-un wa huwa bāk-in
 arise.PST-3SG.M Zaid-NOM CONJ 3SG.M weep.PART-NOM
 ‘Zaid arose weeping’

The same sentence is reported in Vennemann, who cites it from “Pokorny (1927-30: 16.139)” (2012, p. 195).

⁷⁸ WALS shows 20 languages with pure vigesimal system and 22 with hybrid vigesimal-decimal system; the only Celtic language in WALS is Irish, reported as hybrid vigesimal-decimal. (<https://wals.info/feature/131A#3/38.96/73.04>).

⁷⁹ There is no mention of case in Gillies (2009) or Macaulay (1992) either.

The Arabic numeral system has been described as “somewhat complicated” (Cowan 1964, 182), “assez complexe (‘rather complex’)” (Kouloughli 1994, 121), “one of the trickiest features of written Arabic” (Haywood and Nahmad 1962, 301), as having “a special difficulty” (Cantarino 1975, II:361), and it has been said that the numerals “do not readily lend themselves to inductive analysis” (Ziadeh and Winder 1957, 148). These observations provide an indication of the complexity of a system which is important to understand but also challenging in the diversity of its categories and rules. (p. 329).

The following table summarises the syntactical rules for the numbers 1-999, compiled on the basis of Ryding’s chapter 15 (pp. 329-353):⁸⁰

Number	Main features of the number(s)	Counted noun number and case
1, 2	adjectives, inflect for gender	follow the noun, agree in gender, number and case
3 to 10	show reverse gender	plural, genitive
11, 12	compounds formed by a variant of the numerals 1 and 2 and a form of 10	singular, accusative
13 to 19	compounds in the accusative; the first element (3 to 9) shows reverse gender agreement with the	singular, accusative
20, 30, 40 ,...	masculine noun	singular, accusative
21, 22, 31, 32, ...	units and tens linked by “and”, 1 and 2 agree in gender; 20, 30, 40 are masculine	singular, accusative
23 to 29, 33 to 39, ...	units and tens linked by “and”, 3 to 9 show reverse gender	singular, accusative
100	feminine noun	singular, genitive
200	100 in the dual	singular, genitive
300 to 999	the number before 100 is masculine, followed by the word 100 in the singular genitive form	singular, genitive
1000	Masculine	singular, genitive

Table 10 - Summary of the syntactical rules for the numbers 1-999, Standard Arabic

Among the scholars that compare similarities, only Hewitt lists “numerals followed by the singular” as a feature shared by Insular Celtic and Hamito-Semitic. He reports about it as “yes in Brythonic; in Irish originally nouns after 20 and higher multiples of 10 stood in the GEN.PL; due to its identity with the nom.sg.⁸¹ in some declensional classes, this gave rise to its reinterpretation as singular”. He also writes that the numerals are followed by the singular also in Semitic languages “for 11 and higher”, observing however that, typologically, “numerals are followed by singular nouns in many languages”.

Hewitt’s generalisation is correct when it comes to Standard Arabic, but on the basis of the information supplied in the Scottish Gaelic reference grammars, only some numbers apparently are followed by a singular noun in Scottish Gaelic. It is therefore not possible to establish if this can be considered as a shared feature by Standard Arabic and Scottish Gaelic.

Also related to the topic of the numerical system, but not mentioned in any of the shared features lists in the literature, is the dual. Standard Arabic has three number categories: singular, dual, and

⁸⁰ I have omitted on purpose many details of these rules, such as how the numbers inflect for case, the syntax of the numbers in the definite form (such as “the three dogs”) etc, because they are not relevant for the scope of the thesis. For the same reason I choose not to report any of examples provided by Ryding.

⁸¹ [sic]

plural, with the dual also syntactically marked on nouns, adjectives, pronouns and finite verbs.⁸² The following examples are taken from Ryding (p. 129, p. 131 and p. 441):

(54)
 Waṣal-a⁸³ safīr-ān
 arrive.PST-3SG.M ambassador.M-DU
 ‘Two ambassadors arrived’

(55)
 Khilāl al sanat-ayn al māḍiyat-ayn
 during DEF year.F-DU DEF PAST.F-DU
 ‘During the past two years’

(56)
 Ya-ktub-ān katab-ā
 3DU-write-IND.M write.PST-3DU.M
 ‘They two write’ ‘they two wrote’

Scottish Gaelic has two categories of number, namely singular and plural, however numerous reference grammars mention traces of a dual system. Macaulay claims that there are “residual features of a dual system” and specifies that “dual is only marked after the numeral *dà* ‘two’ and only in feminine nouns that have marked forms of the prepositional/dative case with which it coincides” (1992, pp. 209 and 209 respectively), noting that “this residual dual system gives rise to no morphological change in masculine noun” (1992, p. 197). The same is reported by Gillies, who writes that “the dual form, which is only found after *dà* ‘two’, is identical to the singular except in the case of feminine 1B nouns, where (in conservative speech) it is identical to the dative singular form, e.g., *aon chas* ‘one foot’, *dà chois* ‘two feet’”, defining the dual form as “a marginal survival in conservative Gaelic in Class 1B nouns⁸⁴ and feminine adjectives: (2009, p. 264 and p. 255 respectively). Finally, Lamb writes about a “vestigial system of dual number marking”, which occurs only “with some short feminine nouns and is identically to their dative forms” and notes that “the article in dual marking can be either /an/ or /na/ depending on the dialect” (p. 206).

Although not a full similarity in the strict sense of the term, it is relevant to notice the occurrence of the dual number category, or some traces of it, in both Standard Arabic and Scottish Gaelic.

(j) Prepositional expressions of possession/‘to have’

There is no verb ‘to have’ in Scottish Gaelic: “to express this notion, one uses a locative construction” with the verb ‘to be’” (Lamb, p. 213), such as in the following examples:

⁸² In the 2nd and the 3rd persons only.

⁸³ The verb is not marked for dual because it precedes the subject, see (f).

⁸⁴ Gillies categorises nouns in Scottish Gaelic into different classes depending on their case inflection, and specifically “on the basis of nominative singular, genitive singular and nominative plural, the minimum information needed to predict all the forms of a noun” (2009, p. 255) and particularly focus on the morphophonological mutation at the end of the nouns, i.e. palatalisation. His example of Class 1B feminine nouns is the following (2009, p. 256):

bròg	bròig-e	bròig-an
brò[g]	bro[ɔ:gə]	brò[gan]
shoe.NOM.SG.F	shoe-GEN.SG	shoe.NOM-PL

(57)

Tha càr againn
 be.PRS car at.1PL

‘We have a car’ (lit. there is a car at us’)

(58)

Bha an iuchair agam
 be.PST DEF key at.1SG

‘I had the key’ (lit. ‘there was a key at me’)

Stalmaszczyk overviews prepositional constructions in Celtic languages and Celtic Englishes, and notes that “it is a well-known fact that possession in Celtic languages is expressed not by a simple lexical verbs⁸⁵ (such as Eng. *have*), but rather through appropriate prepositional possessive constructions”. He compares such constructions among Irish, Scottish Gaelic and Manx, and reports the following examples for Scottish Gaelic (2007, p. 137):

(59)

Tha airgead agam
 be.PRS money at.1SG

‘I have money’ (lit. money is at me’)

(60)

Tha taigh aig Seumas
 be.PRS house at.3SG Seumas

‘Seumas has a house’ (lit. a house is at Seumas’)

Ryding does not specifically mention the lack of the verb ‘to have’ in Standard Arabic, but both Ryding (p. 312, p. 372, p. 393, p. 399) and Badawi et al. (2016, p. 239, p. 217) report the use of locative constructions to express it.⁸⁶ The following examples are from Ryding:

(61)

’Ind-ī mushkilat-un
 at-1SG problem-NOM

‘I have a problem’ (lit. ‘at me is a problem’)

(62)

Laday-himā ashīā’-u mushtarakat-un kathīrat-un
 at-3DU things-NOM common-NOM many-NOM⁸⁷

‘They two have many things in common’ (lit. at them two are many things in common)

(63)

Kān-a la-hā manzil-un badī’-un
 be.PST-3SG.M to-3SG.F house.M-NOM wonderful.M-NOM

‘She had a wonderful house’ (lit. ‘to her was a wonderful house’)

⁸⁵ [sic]

⁸⁶ “In spoken Arabic, *’inda* plays a fundamental role in the expression of possession, and some of that possession role has crept into MSA [...]. The more usual preposition to use for possession in formal MSA is *li-*, or the semipreposition *ladaa*”. (Ryding, p. 399).

“in MWA *ladā* conveys a general sense of possession and is sometimes used where one might expect to find *’inda* or even *li-*.” (Badawi et al. 2016, p. 216)

⁸⁷ As mentioned before, in Standard Arabic non-human plurals are treated as feminine singular (deflected agreement).

Hewitt also notes that “en arabe il n’y a pas de verbe ‘avoir’”,⁸⁸ stating that in Arabic it is expressed by means of “locutions prépositionnelles”⁸⁹ (1985, p. 240); however, he writes, although Breton “is the only Celtic language to have a ‘have’ ”, possession of definites on Breton is also “usually expressed with prepositional periphrasis [...] as it is in the other Celtic languages, Hamito-Semitic, and many other languages worldwide” (2009, p. 985).

In view of the above therefore, I can conclude that prepositional constructions to express ‘to have’ can be considered a feature shared by Scottish Gaelic and Standard Arabic.

(k) Unmarked collective nouns and derived singulative

Lamb briefly reports that uncountable nouns in Scottish Gaelic are “either mass nouns, such as *bainne* ‘milk’ and *min* ‘meal’, or collective ones such as *crodh* ‘cattle’ ” (p. 206) and cites Macaulay, who writes that “some uncountables have singulative correlates”, although “many mass nouns have no derived singulative” (1992, p. 207 and p. 208 respectively). His examples of singulative correlates are *gràn* ‘grain’ with *gràinne* ‘a grain’ and *falt* ‘hair’ with *fultean* ‘a hair’ (1992, p. 207). As for mass nouns that have no derived singulative, he specifies that “there is a set of words that denote something like ‘the least quantity of’ which have quasi-singulative force”: for example *beathach cruiddh* corresponds to ‘an animal of cattle’ (1992, p. 208).

As for Standard Arabic, Ryding writes that mass nouns like stone or wood can be referenced to morphologically to indicate an “individual component of the collection or the mass.”⁹⁰ [...] Most mass nouns or collective nouns are masculine singular, whereas most unit nouns [...] are feminine singular” (p. 94). Among Ryding’s many examples are *dajāj* ‘chicken’, *bayḍ* ‘egg’ and *ḥajar* ‘stone’, that become countable units by adding a suffix *a*, namely *dajāja* ‘a chicken’, *bayḍa* ‘an egg’ and *ḥajara* ‘a stone’ (pp. 94-95).

Hewitt notes that the feature ‘unmarked collective, derived singulative’ is “particularly productive in Breton” as well as in Arabic, but he notes that it is “less so in Welsh and Hebrew, and it is quite marginal in Irish” (2009, p. 987). My conclusion, based on the Scottish Gaelic reference grammars, is that it is marginal in Scottish Gaelic, too - and for this reason it cannot be regarded as a shared feature.

5. Discussion

The analysis of the features in the reference grammars have shown that there are indeed structural similarities between Scottish Gaelic and Standard Arabic, and a number of them occur, as reported in each subsection, also in other languages of the Insular Celtic and Semitic groups. In particular, the following features were found to occur similarly in both Standard Arabic and Scottish Gaelic:

- (a) conjugated prepositions
- (b) VSO word order
- (h) circumstantial clause
- (j) prepositional expressions of possession/‘to have’

⁸⁸ “In Arabic there is no verb ‘to have’”.

⁸⁹ “Prepositional phrases”.

⁹⁰ In Arabic they are called *ism al-jins* (the name of the type/kind) and *ism al-wahda* (the name of the unit).

The following two structures also occur in both languages, although with some syntactical differences:

- (e) genitive construction, or construct state: head/dependent marking
- (g) the verbal noun

For the following three features, it has been impossible to establish whether there is a similarity between the two languages, because of the lack of exhaustive information about them in the literature for Scottish Gaelic:

- (c) relative clauses: copying (and not gapping) strategy, resumptive pronouns
- (d) subject and object marking in verb
- (i) numerals: followed by the singular; the dual

Finally, the following two features were found not shared by both languages, i.e. occurring only in Standard Arabic:

- (f) non-agreement of verb with plural noun subject
- (k) unmarked collective nouns and derived singulative.

The results of this thesis have suffered from a main limitation in terms of the scope of the research, due to the reference grammar material existing and available for Scottish Gaelic that has proven not to be as exhaustive and detailed as the material available for Standard Arabic. For this reason, this thesis would obviously benefit enormously from further joint research together with linguists that can speak Scottish Gaelic.⁹¹

Nevertheless, the perusal of the reference grammars has also shown that, in addition to the similarities between the specific grammatical features of Hamito-Semitic and Insular Celtic languages mentioned in the various scholars' lists, Scottish Gaelic and Standard Arabic also share other, more general, similarities. For example, in both languages the noun precedes the adjective in a nominal phrase.⁹² Scottish Gaelic and Standard Arabic are also typologically similar when it comes to verb-subject agreement, as the verb agrees with its subject in terms of person and number - and for Standard Arabic also in gender.⁹³ Morphologically, they are both non-concatenative. As shown in the previous section, in Standard Arabic the morphological processes are fusional, or rather introflexive (Velupillai 2012), because of Standard Arabic's system of roots and sets of patterns, which is typologically common to the Semitic languages. As for Scottish Gaelic, although its verbal system is mostly agglutinative, it has been noted that nouns, adjectives, and even prepositions exhibit fusional features, since multiple grammatical features such as gender, number, and case are merged through not only morphological but also morphophonological processes.

It is important to notice that of the six features that were found as shared by Scottish Gaelic and Standard Arabic, four of them (a) conjugated prepositions; (b) VSO word order; (e) genitive construction; (j) prepositional expressions of possession) are also typologically shared by several other languages in the world. Conjugated prepositions (a) is to be related to the wider typological feature concerned with pronominal suffixation to adpositions, and, as such, it can be observed in several other languages of different families, even in the European geographical area, such as

⁹¹ I have strived not to let my knowledge of Arabic influence me, and I have only cited examples of Arabic that are mentioned in the literature, so that this study can be replicated. However, I cannot hide the fact that it has been easier for me to find good explanations as well as representative examples for the topics in Arabic.

⁹² In Scottish Gaelic with some exceptions "confined largely to poetic language" (Lamb, p. 220); for Standard Arabic see Ryding, p. 239. WALS reports 373 languages in which the adjective precedes the noun, 879 languages with the noun preceding the adjective and 110 languages with no dominant order. <https://wals.info/feature/87A#4/46.80/24.49>.

⁹³ For the peculiarity of the non-agreement in number of verb and subject in Standard Arabic in certain cases, see (f) in the previous section.

Finnish and Hungarian (Uralic). In this regard, Isaac also mentions Tariana (Arawak), Yimas (Papuan) and Bella Coola (Salishan) (2008, pp. 54-55), and WALS reports 83 out of a total of 378 featured languages (22%) that mark pronouns on adpositions.⁹⁴ As for VSO word order (b), it is true that it is atypical among Indo-European languages, but Old Russian and Old Serbian are also, according to Isaac, “strongly verb-initial” (2008, p. 60). Overall, VSO is not very common worldwide - as noted in Section a (b) above, WALS reports 95 VSO languages out of 1376 (approx. 7%),⁹⁵ spread on the five continents and among several different language families.⁹⁶ As for the lack of a verb ‘to have’, Scottish Gaelic and Standard Arabic are not the only languages that that express possession by means of locative constructions: WALS reports 48 out of a total of 240 featured languages (20%) with Locational Possessives, with an example from Written Mongolic.⁹⁷ Regarding head/dependent marking, 46 (19%) of the 236 languages featured in WALS are reported as “consistently dependent-marking”.⁹⁸

The widespread occurrence of these four features across different language families naturally leads to a discussion about typological universals, defined as statistical generalisations of the distribution of certain grammatical patterns. Greenberg’s empirical generalisations, although based on a sample of only 30 languages,⁹⁹ resulted in 45 typological universal statements, 25 of which are implicational, which means that they are statements correlating the occurrence of a particular feature to another feature (1963). A discussion about the validity and reliability of typological universals, as well as an overview of the scholarly debate around them, is beyond the purpose of this thesis; however, it is worth mentioning that, among the ones that are applicable, at least 12 universals have been proven valid for both Standard Arabic and Scottish Gaelic, on the sole basis of the scrutiny of the reference grammars employed for the analysis of the similarities discussed in this thesis.¹⁰⁰ Specifically, Greenberg’s Universals n 2, 3 and 17¹⁰¹ are particularly relevant in relationship to the four features ((a), (b), (e) and (j)) shared by Scottish Gaelic and Standard Arabic mentioned above, as they relate VSO word order to the position of the noun and the adjective, the noun and the genitive and the occurrence of prepositions.

⁹⁴ <https://wals.info/feature/48A#4/43.26/41.18>. WALs exemplifies this feature in a sentence in Paamese (Austronesian, Vanuatu). Hungarian and Yimas are included in the WALs map and count, but WALs does not report Scottish Gaelic, Standard Arabic, Tariana and Bella Coola for this feature at all, although it reports both Irish and Welsh for the Insular Celtic languages. This hints that the actual number of languages with conjugated adpositions may be more than just 83.

⁹⁵ <https://wals.info/feature/81A#2/18.0/153.1>

⁹⁶ This wide distribution can be exemplified, besides of course Insular Celtic languages and a several languages of the AfroAsiatic family already mentioned in the thesis, by citing some of the VSO languages shown in the WALs map, such as Cebuano in the Philippines, Hawaiian, Maori in New Zealand and Rapanui on Easter Island (all Austronesian), Maasai, Turkana and several others of the Eastern Sudanic family in Central Africa, Nisgha (Tsimshianic) and Bella Coola (Salishan) in Canada, Nahuatl (Uto-Aztecan) and Tlapanec (Oto-Manguean) in Mexico as well as Guajajara (Tupian) in Brazil.

⁹⁷ <https://wals.info/feature/117A#2/25.8/160.8>. This is also a worldwide spread feature according to the WALs map: besides the Celtic languages, also Russian (Indo-European) and Finnish (Uralic) in Europe, besides Standard Arabic also Amharic and Tuareg (Afro-Asiatic) as well as Ewe (Niger-Congo) in the African continent; Tamil (Dravidian), Korean and Japanese in Asia; Samoan and Fijian (Austronesian) in Oceania; Seneca (Iroquaian) and Wichita (Caddoan) in North America and Canela (Macro-Ge) in South America.

⁹⁸ <https://wals.info/feature/25A#3/36.03/87.81>. Neither Standard Arabic nor Scottish Gaelic is reported in WALs for this feature.

⁹⁹ Both Insular Celtic and Semitic languages were included in the samples, among them Welsh and Hebrew, which are relevant for this thesis.

¹⁰⁰ Universals nr. 1, 2, 3, 6, 16, 17, 30, 31, 34, 36, 42, 43 (Greenberg 1963, pp. 110-113)

¹⁰¹ Universal nr. 2 “In languages with prepositions, the genitive almost always follows the governing noun, while in languages with postpositions it almost always precedes.”

Universal nr. 3 “Languages with dominant VSO are always prepositional”.

Universal nr. 17 “With overwhelmingly more than chance frequency, languages with dominant order VSO have the adjective after the noun.

The co-occurrence of VSO word order with the position of the noun with respect to the adjective and the genitive has been noted by several other scholars, for example Hawkins pointed out that “VSO languages are significantly more noun-initial within their NP’s than are SVO languages” (1979, p. 645). On the basis of Greenberg’s languages list of Basic Order Types (Appendix II, 1963) and in relation to Greenberg’s Universals nr. 2 and 3, Hawkins found 25 languages with VSO and prepositions, and found that in 19 of them (76%) the noun precedes the adjective and the genitive. Hawkins also found 60 languages with SOV and postpositions, of which 29 of them (48%) have the adjective before the noun and the genitive before the noun, while in 24 (40%) the noun precedes the adjective and follows the genitive. Of a total of 30 SVO languages with prepositions, he found that in 20 (66%) the noun precedes the adjective and the genitive (1979, p. 645).

Isaac also mentions the relationship between VSO and the position of the noun in relation to the adjective and a genitive construction. In his argument against the contact theory reported in Section 2.4, Isaac states that “given clause level VSO, it is an implicational typological commonplace that at NP level the orders NAdj. and NGen. would be expected” (2008, p. 28). Isaac elaborated the data available with the first version of WALS, published as a book with CD-ROM in 2005, and correlated languages with three variables, namely the order of Subject, Verb and Object, the order of Noun and Genitive and the order of Noun and Adjective, finding that 61 (9%) of the total 682 languages featured¹⁰² share the same typological features of Insular Celtic and Afro-Asiatic, that is the verb in the initial position, the noun preceding the genitive (dependent marking) and the noun preceding the adjective.

I ran a similar comparison with WALS in its online version, combining first the same features elaborated by Isaac (2008), namely features 81A (Order of Subject, Object and Verb), 86A (Order of Genitive and Noun), and 87A (Order of Adjective and Noun),¹⁰³ and then adding the feature of the type of adpositions, namely feature 85A (Order of Adposition and Noun Phrase).

A first combination of the features 81A (Order of Subject, Object and Verb) and 86A (Order of Genitive and Noun) resulted in 84 VSO languages, out of a total of 1099 accounted for in WALS, of which 77 languages have the noun preceding the genitive, as shown in the following table:¹⁰⁴

Order of Noun / Genitive for VSO languages	Nr of languages
<i>Noun-Genitive</i>	77
No dominant order	4
Genitive-Noun	3
Total VSO languages	84

Table 11 - Order of Subject, Object and Verb and Order of Genitive and Noun

The following table reports the order of the noun and the adjective as well as of the noun and the genitive for the 82 VSO languages accounted for in WALS (total languages 1011):¹⁰⁵

¹⁰² Isaac states that “languages with no dominant order in any parameter have been ignored” (2008, p. 56).

¹⁰³ The order of adjective and noun is not included my list of shared features of Standard Arabic and Scottish Gaelic because it is not mentioned in any scholar’s research work (see Section 3 Method), but, as mentioned above, it has resulted evident from my perusal of the two languages’ reference grammars.

¹⁰⁴ https://wals.info/combinations/81A_86A#2/26.2/153.0

¹⁰⁵ Features 81A (Order of Subject, Object and Verb), 86A (Order of Genitive and Noun), and 87A (Order of Adjective and Noun). I am excluding from the table the VSO combinations showing 0 languages. https://wals.info/combinations/86A_81A_87A#2/26.2/153.0

Order of Noun / Adjective and Noun / Genitive	Nr of languages	Percent
<i>Noun-Adjective / Noun-Genitive</i>	53	65%
Adjective-Noun / Noun-Genitive	16	20%
No dominant order / Noun-Genitive	6	7%
Noun-Adjective / No dominant order	3	4%
Noun-Adjective / Genitive-Noun	2	2%
No dominant order / No dominant order	1	1%
No dominant order / Genitive-Noun	1	1%
Total VSO languages	82	100%

Table 12 - VSO languages with position of Adjective and Genitive with respect to the Noun, quantity and percentage

Both tables above confirm Hawkins's and Isaac's statements, that is the higher likelihood for VSO languages of the occurrence of the order Noun-Genitive (Table 10) as well as of the order Noun-Genitive with Noun-Adjective (Table 11). Both Scottish Gaelic and Standard Arabic belong to the typological majority (in italics in the Tables).

The following table reports the dominant positions, in VSO, SVO and SOV languages, of the order of the Noun and the Genitive, the order of Noun and Adjective, and the type of adpositions, grouped according to the Order of Subject, Verb, and Object and in decreasing order (the total languages reported in WALS for the combination of these features is 850, percentages of total accounted languages in brackets):¹⁰⁶

Order of Noun-Adjective and Noun-Genitive with adpositions	Number of languages	Percent
<i>Noun-Adjective / Prepositions / Noun-Genitive / VSO</i>	49	6%
Adjective-Noun / Prepositions / Noun-Genitive / VSO	13	2%
Noun-Adjective / Prepositions / Noun-Genitive / SVO	153	18%
Noun-Adjective / Prepositions / Genitive-Noun / SVO	36	4%
Adjective-Noun / Prepositions / Noun-Genitive / SVO	25	3%
Noun-Adjective / Postpositions / Genitive-Noun / SVO	19	2%
Noun-Adjective / Prepositions / No dominant order / SVO	15	2%
Adjective-Noun / Prepositions / No dominant order / SVO	12	1%
No dominant order / Prepositions / Noun-Genitive / SVO	10	1%
Noun-Adjective / Postpositions / Genitive-Noun / SOV	148	17%
Adjective-Noun / Postpositions / Genitive-Noun / SOV	117	14%
No dominant order / Postpositions / Genitive-Noun / SOV	14	2%

Table 13 - Dominant positions in VSO, SVO and SOV languages of the order of the Noun and the Genitive, the order of Noun and Adjective, and the type of adpositions

Both Scottish Gaelic and Standard Arabic belong to the typological majority here of VSO languages (in italics in the table).

The above table can also be compared to Hawkins's conclusions (1979, p. 645), as it shows analogous results, although on a larger scale. In fact, it is evident that both VSO and SVO languages tend to have prepositions, with the adjective after the noun and the genitive after the noun, while

¹⁰⁶I am only reporting the combinations occurring in at least 10 languages. For the whole detailed list, see https://wals.info/combinations/87A_86A_81A_85A#2/26.2/153.0

SOV languages the tendency is postpositions and the genitive before the noun, with both the noun before the adjective and the adjective before the noun occurring almost as frequently.

In view of the above, the similarities found between Scottish Gaelic and Standard Arabic in this thesis are not as surprising as some scholars mean. Since these features occur in several languages of different families throughout the world, they do not constitute enough evidence for the substrate hypothesis, postulated by several scholars and overviewed in Section 2.4. Instead, such widespread occurrence of certain features supports the generalisations put forth by the Typological Universals, and they can be both attributed to coincidences as well as considered as evidence of the fact that different language families develop similar ways to express the same representations of human cognitive processes. In this respect, I found Evans and Levinson's article *The Myth of Language Universals* (2009) particularly interesting and especially relevant in relationship to the substrate or contact theory. Evans and Levinson discuss language diversity from a cognitive perspective and propose an evolutionary approach to understand it, noting how the research field of historical linguistics, traditionally concerned with "lineal inheritance versus horizontal transfer through contact and borrowing" (2009, p. 444), has recently applied bioinformatic methods and techniques¹⁰⁷ not only to track vocabulary changes in languages descending from each other but also to explain Greenberg's universals and understand language diversity. By means of these new methods, they write,

The emerging picture, then, confirms the view that most linguistic diversity is the product of historical cultural evolution operating on relatively independent traits. [...] In short, there are evolutionarily stable strategies, local minima as it were, that are recurrent solutions across time and space, such as the tendency to distinguish noun and verb roots, to have a subject role, or mutually consistent approaches to the ordering of head and modifier, which underlie the Greenbergian statistical universals linking different features. These tendencies cannot plausibly be attributed to UG, since changes from one stable strategy to another take generations (sometimes millennia) to work through. Instead, they result from myriad interactions between communicative, cognitive, and processing constraints which reshape existing structures through use. (2009, p. 444)

This approach based on historical cultural evolution is partly reflected in some of the studies by scholars concerned with the explanation of the reasons for structural similarities between Insular Celtic and Hamito-Semitic languages, for example by Theo Vennemann, who investigated the etymological origin of toponyms of rivers, lakes, mountains as well as of coastal settlements. Vennemann concluded that they constitute proof of contact between populations already settled in Western European coastal areas and Indo-European migrants that came into contact with them upon their arrival in the region.¹⁰⁸ As noted in Section 2, Vennemann's postulations have been criticised by numerous scholars and defined as mere speculations or coincidences at their best (for ex. Isaac 2008, Hewitt 2009, Matasović 2007), especially because he built the foundations of his theoretical framework on mere assumptions by previous scholars and treated them as proof. Gensler, another supporter of the contact theory, is more cautious, and postulates that

when languages show similarities of any sort, there are four possible approaches to accounting for the resemblance. They can be ascribed to common genetic inheritance, or to contact phenomena in the broad sense of the word (including ad/sub/superstratal influence, areality, bilingualism, etc), to a natural typological affinity among the similarity features, or finally to unmotivated coincidence (2007, p. 152).

¹⁰⁷ Evans and Levinson mention Bayesian phylogenetics and cladistics, which are traditionally more related to the field of biology than to linguistics (2009, p. 444). Bayesian phylogenetics as method to "test hypotheses about prehistory regarding the subgrouping, origins, expansion, and timing of the languages and their speakers" is explained in detail by Hoffmann et al. (2021, p. 119). Phylogenetics has been employed in several studies concerning typological diversity, see for example Dunn et al.'s evaluation of the typological diversity in Island Melanesia (2007, 2008).

¹⁰⁸ See for example Vennemann 2001 (p. 352-353) and Vennemann 2012 (p. 36, quote reported in the footnote nr. 18 above)

He concluded making his position very clear, writing that

The result, in a nutshell, is that prehistoric contact (in the broad sense) does appear to be the most likely way of accounting for the resemblances. I do not believe this claim can be “proven”; I advance it only as the most reasonable way of interpreting the evidence.

I find myself in disagreement with Gensler’s statement above, in particular with his claim that a prehistoric contact is the most likely explanation for any similarities between Insular Celtic and Hamito-Semitic languages. Although I acknowledge the occurrence of similar grammatical structures between Standard Arabic and Scottish Gaelic, as well as between other Insular Celtic and Hamito-Semitic languages, I think that said similarities, as well as the few ones found in this thesis between Standard Arabic and Scottish Gaelic, do not constitute enough evidence for the substrate hypothesis. In my opinion, harder evidence is needed to confirm the validity of the contact theory, because, as it has become evident from the discussion above, the same grammatical structures are indeed shared by several other language families across the world. For this reason, I am prone to underscore the importance of the bioinformatic methods and techniques mentioned by several scholars in the field of historical linguistics. In my opinion, these methods may actually shed light on the issue, since it seems that they can be employed to establish and verify genetic relationships among different languages and language families, and thus they may eventually settle the dispute once and for all about the substrate hypothesis.

6. Summary and conclusion

This thesis has attempted to determine what grammatical structures are shared features by Scottish Gaelic and Standard Arabic and how these similarities are relevant from a typological perspective. The topic has been introduced first by presenting the two languages and then by overviewing the scholarly literature of the research field concerned with similarities shared by Insular Celtic and Hamito-Semitic languages, from which a list of features that are relevant for Standard Arabic was compiled. Each listed feature has been subsequently researched in the reference grammars of Scottish Gaelic and Standard Arabic, and compared, also in relationship to the literature about Celtic and Semitic similarities. The results have shown that Scottish Gaelic and Standard Arabic share a number of structural similarities, such as conjugated prepositions, VSO word order, the circumstantial clause and prepositional expressions of possession/‘to have’. Other features were also found shared by both languages, although with some syntactical differences, such as the genitive construction and the verbal noun. The occurrence of said similarities has been discussed from a typological perspective, in particular with reference to typological universals and their occurrence across several language families. Said similarities have been deemed as insufficient evidence for the validity of the substrate hypothesis.

References

- Adger, D. (1996). Aspect, agreement and measure phrases in Scottish Gaelic. In Borsley, R. D. & Roberts, I. (Eds). *The syntax of the Celtic languages: A comparative perspective* (pp. 200-221). Cambridge University Press.
- Adger, D. (2007). Pronouns postpose at PF. *Linguistic Inquiry*, 38(2), 343-349.
- Adger, D. (2010). Gaelic morphology. In Watson, M. & Macleod, M. (Eds). *The Edinburgh companion to the Gaelic language* (pp. 283-303). Edinburgh University Press.
- Badawi, E., Carter, M. G., Gully, A., & Awad, M. (2015). *Modern Written Arabic: A comprehensive grammar*
<https://doi.org/10.4324/9781315856155>
- Baldi, P., & Page, B. R. (2006). Europa vasconica-europa semitica. Theo Vennemann, Gen. Nierfeld, in: Patrizia Noel Aziz Hanna (Ed.), Trends in linguistics, studies and monographs 138, Mouton De Gruyter, 2003, pp. xxii + 977. *Lingua*, 116(12), 2183-2220. <https://doi.org/10.1016/j.lingua.2005.03.011>
- Basic Law of Governance*, 1992, Saudi Arabia. <https://www.saudiembassy.net/basic-law-governance>
- Bohas, G., Guillaume, J.P., & Kouloughli, D. (1990). *The Arabic linguistic tradition*. Georgetown University Press.
- Britannica Academic (n.d.). *Ireland*.
- Calder, G. (1923). *A Gaelic grammar*. Alex. MacLaren & Sons.
- Carmody, F. (1945). Syntax of the verb IS in modern Scottish Gaelic. *WORD*, 1(2), 162-187.
<https://doi.org/10.1080/00437956.1945.11659252>
- Dryer, Matthew S. & Haspelmath, Martin (eds.) 2013. WALS Online (v2020.3) [Data set]. Zenodo.
<https://doi.org/10.5281/zenodo.7385533> . Available online at <https://wals.info>.
- Dunn, M., Foley, R., Levinson, S. Reesink, G., Terrill, A. (2007). Statistical reasoning in the evaluation of typological diversity in Island Melanesia. *Oceanic Linguistics*, (46)2, 338-403.
- Dunn, M., Levinson, S., Lindström, E., Reesink, G. Terrill, A. (2008). Structural phylogeny in historical linguistics: Methodological explorations applied in Island Melanesia. *Language*, (84)4, 710-759.
- Eberhard, D. M., Simons, G. F. & Fennig, C. D. (Eds.) (2022). *Ethnologue: Languages of the world*. Twenty-fifth edition. Dallas, Texas: SIL International (online version: <http://www.ethnologue.com>)
- Evans, N. & Levinson, S. C. (2009). The myth of language universals: Language diversity and its importance for cognitive science. *Behavioural and Brain Sciences*, 32, 429-492. <https://doi.org/10.1017/S0140525X0999094X>
- Ferguson, C. (1959). Diglossia. *Word*, 15(2), 325-340. <https://doi.org/10.1080/00437956.1959.11659702>
- Ferguson, C. (1989). Grammatical agreement in Classical Arabic and the modern dialects: A response to Versteegh's Pidginization hypothesis. *Al-'Arabiyya*, 22, 1/2, 5-17.
- Gaelic Language (Scotland) Act 2005*. <https://www.legislation.gov.uk/asp/2005/7/contents> .
- Gensler, O. D. (1993). *A typological evaluation of Celtic/Hamito-semitic syntactic parallels*. Unpublished PhD dissertation, University of California, Berkeley.
- Gensler, O.D. (2007). Extracts from A typological evaluation of Celtic/Hamito-semitic syntactic parallels. In Karl, R. & Stifter, D. (Eds). *The Celtic world: Critical concepts in historical studies. Vol IV, Celtic Linguistics* (pp. 151-229). Routledge.
- Gillies, W. (2009). Scottish Gaelic. In Ball, M. J. & Müller, N. (eds). *The Celtic languages* (2nd ed., pp. 230-304). Routledge. <https://doi.org/10.4324/9780203882481>
- Green, A.D. (2006). The independence of phonology and morphology: The Celtic mutations. *Lingua*, 116, 1946–1985.
- Greenberg, J. H. (1963). Some universals of grammar with particular reference to the order of meaningful elements. In Greenberg, J. H. (Ed.) *Universals of Language* (pp. 73-113). MIT Press.

- Hannahs, S.J. (2011). Celtic Mutations. In Oostendorp, M., Ewen, C., Hume, E. & Rice, K. (Eds). *Companions to linguistics: The Blackwell companion to phonology*, 5 (pp. 2807-2830). Blackwell.
- Hammarström, H., Forkel, R., Haspelmath, M. & Bank, S. (2022). *Glottolog 4.7*. Leipzig: Max Planck Institute for Evolutionary Anthropology. <https://doi.org/10.5281/zenodo.7398962> (Available online at <http://glottolog.org>).
- Hanitsch, M. (2022). Angels, beasts, and impressive things. A radial category approach to Qur'ānic Arabic feminine plural agreement. *J AIS Journal of Arabic and Islamic Studies*, 22(1), 51–102. <https://doi.org/10.5617/jais.9996>
- Hawkins, J. A. (1979). Implicational universals as predictors of word order change. *Language*, 55(3), 618-648.
- Hewitt, S. (1985). Quelques ressemblances structurales entre le breton et l'arabe: conséquence d'une typologie ordinale commune? *La Bretagne Linguistique*, 1, 223-262.
- Hewitt, S. (2009). The question of a Hamito-Semitic substratum in insular Celtic. *Language and Linguistic Compass*, 3/4, pp. 972-995. DOI 10.1111/j.1749-818x.2009.00141.x
- Hoffmann, K., Bouckaert, R., Greenhill, S. J., Kühnert, D. (2021). Bayesian phylogenetics analysis of linguistic data using BEAST. *Journal of Language Evolution*, 6(2), 119-135. <https://doi.org/10.1093/jole/lzab005>.
- Holes, C. (2004). *Modern Arabic: Structures, functions, and varieties*. Georgetown University Press.
- IJMES Transliteration System. International Journal of Middle East Studies. Retrieved from <https://www.cambridge.org/core/services/aop-file-manager/file/57d83390f6ea5a022234b400/TransChart.pdf>.
- Isaac, G. (2008). Celtic and Afro-Asiatic. In Tristram, H. (Ed). *The Celtic languages in contact: papers from the workshop within the framework of the XIII International Congress of Celtic Studies, Bonn* (pp. 25–80). Potsdam.
- Jongeling, K. (1987). Welsh and Hebrew. *Carn*, 58, 23-24.
- Jongeling, K. (1995). Afro-Asiatic and Insular Celtic. *Dutch Studies*, 2, 135-165.
- Jongeling, K. (2000). *Comparing Welsh and Hebrew*. CNWS Publications, Leiden University.
- Ladefoged, P., Ladefoged, J., Turk A., Hind, K. & Skilton, J. (1998). Phonetic structures of Scottish Gaelic. *Journal of the International Phonetic Association*, 28(1-2), 1-41.
- Lamb, W. (2008). A descriptive grammar of Scottish Gaelic. *Scottish Gaelic speech and writing: Register variation in an endangered language* (pp. 197-286). Cló Ollscoil na Barríona.
- Landgraf, J. (2011). Tense in the Scottish Gaelic verbal system. In Musan, R. & Rather, M. (Eds). *Tense across languages* (pp. 109-125). De Gruyter, Inc. <https://doi.org/10.1515/9783110267020.109>
- Langfocus (2019). *Strange similarities between Celtic and Semitic languages*. (Video) YouTube. <https://www.youtube.com/watch?v=OAAmwtdP1bE>
- Lehmann, C. (2004). Interlinear morphemic glossing. In Booij, G., Mugdan, J. & Skopeteas, S. (Eds), *Morphologie. Ein internationales Handbuch zur Flexion und Wortbildung*. 2. Halbband. W. de Gruyter (Handbücher zur Sprach- und Kommunikationswissenschaft, 17.2). DOI: 10.1515/9783110172782.2.20.1834
- Leipzig Glossing Rules* (2015). Retrieved from <https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf>
- MacAulay, D. (1992). *The Celtic languages*. Cambridge University Press.
- Matasović, R. (2007). Insular Celtic as language area. In Tristram, H. (Ed). *The Celtic languages in contact: papers from the workshop within the framework of the XIII International Congress of Celtic Studies, Bonn* (pp. 93-112), Potsdam.
- Matthews, P. (2014). verbal noun. In *The Concise Oxford Dictionary of Linguistics*. Oxford University Press. Retrieved from <https://www-oxfordreference-com>
- Morris Jones, J. (1900). Pre-Aryan syntax in Insular Celtic. Reprinted in Karl, R. & Stifter, D. (Eds) (2007). *The Celtic world: Critical concepts in historical studies. Vol IV, Celtic Linguistics* (pp. 103-121). Routledge.
- Nance, C. & Ó Maolalaigh, R. (2021). Scottish Gaelic. *Journal of the International Phonetic Association*, 51(2), 261-275. <https://doi.org/10.1017/S002510031900015X>
- Owens, J. (Ed) (2013). *The Oxford Handbook of Arabic Linguistics*. Oxford University Press.

- Owens, J. (2021). Deflected agreement and verb singular in Arabic: a three-stage historical model. *Journal of Semitic Studies*, LXVI/2, 483-502. <https://doi.org/10.1093/jss/fgab014>
- Pokorny, J. (1960). The pre-Celtic inhabitants of Ireland. Reprinted in Karl, R. & Stifter, D. (Eds) (2007). *The Celtic world: Critical concepts in historical studies. Vol IV, Celtic Linguistics* (pp. 122-132). Routledge.
- Ramchand, G. C. (1993a). Aspect phrase in modern Scottish Gaelic. *North East Linguistics Society*, 23(2), 415-429. <https://scholarworks.umass.edu/nels/vol23/iss2/11/>
- Ramchand, G. C. (1993b). Verbal nouns and event structure in Scottish Gaelic. In Lahiri, U. & Wyner, A. (Eds). *SALT III*, 162-181. Cornell University Press.
- Ramchand, G. C. (1997). *Aspect and predication: The semantics of argument structure*. Clarendon Press.
- Ramchand, G.C. (2005). *Prepositions in Scottish Gaelic*. P Seminar/CASTL Center for Advanced Studies of Theoretical Linguistics, UiTø Arctic University of Norway Tromsø. https://www.researchgate.net/profile/Gillian-Ramchand/publication/238620727_Prepositions_in_Scottish_Gaelic/links/0f31752fa2d57c06f6000000/Prepositions-in-Scottish-Gaelic.pdf
- Reed, S. L. (2012). Multiple perfects in Scottish Gaelic. *Proceedings of the 29th West Coast Conference on formal linguistics* (pp. 389-397). Cascadilla Proceedings Project.
- Ryding, K. C. (2005). *A reference grammar of Modern Standard Arabic*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511486975>
- Ryding, K., & Wilmsen, D. (Eds). (2021). *The Cambridge Handbook of Arabic Linguistics*. Cambridge University Press. doi:10.1017/9781108277327
- Scotland's Census. *Languages*. <https://www.scotlandscensus.gov.uk/census-results/at-a-glance/languages/>
- Stalmaszczyk, P. (2007). Prepositional possessive constructions in Celtic languages and Celtic Englishes. In Tristram, H. (Ed). *The Celtic languages in contact: papers from the workshop within the framework of the XIII International Congress of Celtic Studies, Bonn* (pp. 121-145). Potsdam.
- Statistics Canada. *Census Profile, 2016 Census*. Topic: Language. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=PR&Code1=01&Geo2=PR&Code2=01&SearchText=Canada&SearchType=Begins&SearchPR=01&B1=Language&TABID=1&type=0>
- Stewart, T. W. & Joseph, B. D. (2009). How big can case systems get? Evidence from Scottish Gaelic. *Word Structure*, 2(1), 108-120.
- Stewart, T. W. (2013). The sub-types of initial lenition in Scottish Gaelic. In Cruickshank, J. & McColl Millar, R. (Eds) *After the storm: Papers from the Forum for Research on the Languages of Scotland and Ulster triennial meeting, Aberdeen 2012*. Aberdeen: Forum for Research on the Languages of Scotland and Ireland (pp. 100-116).
- Stifter, D. (2007). Introduction. In Karl, R. & Stifter, D. (Eds). *The Celtic world: Critical concepts in historical studies. Vol IV, Celtic Linguistics* (pp. 1-5). Routledge.
- Tomlin, R. S. (1986). *Basic word Order: Functional principles*. Croom Helm.
- Velupillai, V. (2012). *An introduction to linguistic typology*. John Benjamins Publishing Company.
- Vennemann, T. (2001). Atlantis Semitica. Structural contact features in Celtic and English. In Brinton, L. J. (Ed) *Historical Linguistics 1999. Selected papers from the 14th International Conference of Historical Linguistics, Vancouver* (pp. 351-369). John Benjamins Publishing Company.
- Vennemann, T. (2003). *Europa vasconica Europa semitica*. Mouton De Gruyter.
- Vennemann, T. (2012). *Germania semitica*. De Gruyter.
- Wagner, H. (1981). Near Eastern and African connections with the Celtic World. Reprinted in Karl, R. & Stifter, D. (Eds) (2007). *The Celtic world: Critical concepts in historical studies. Vol IV, Celtic Linguistics* (pp. 133-146). Routledge.
- Wagner, H. (1987). The Celtic invasions of Ireland and Great Britain : Facts and theories. *Zeitschrift für celtische Philologie*, 42 (1), 1-40. <https://doi.org/10.1515/zcph.1987.42.1.1>