Morphological Complexity in Maltese: A divergence from canonicity

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1. Introduction

The paper discusses the notion of *morphological complexity* in Maltese. Morphological complexity is here understood in the same sense as Aronoff's (1994) *morphology by itself*, where the morphology is considered as a separate component in the grammar; a notion that has been recently referred to as *autonomous morphology* (refer for example to Maiden et al. 2011). The aim of this paper is to illustrate how Maltese exhibits a number of phenomena which are complex in the way understood here, i.e. pertaining to the language's morphological component. The complexity discussed will be mostly paradigm-internal, but will also involve interesting accounts of what takes place across lexemes that have long been traditionally classified as belonging to the same set, and will involve phenomena such as stem patterns, which come about as a result of stem allomorphy within the paradigm (Vogel 1994, Booij 1996, Fabri 2009), overabundance, and heteroclisis, and the interactions of these together. Apart from displaying the complexity at hand, the presence of stem allomorphy internal to paradigms falsifies definitions of stems along the lines of Nakov et al. (2004), who define the stem as 'the common part shared by all inflected word-forms' within a paradigm. The work presented here will also go against paradigm definitions that consider *form* relatedness as an essential criterion, e.g. Kenstowicz (2005), who defines the inflectional paradigm as 'words sharing the same stem and differ in the exponence of formal features ...' (p. 47). This results in an underrepresentation of what would have also been regarded as a paradigm, considering that every lexeme 'may have a multitude of distinct stems' (Stump, 2001, p. 33), which can come about as a result of stem-alternations, suppletion or semi-suppletion that results from heteroclisis. Much of the data presented and analysed in this paper has not been discussed in the literature on Maltese. While the language has been characterised by its mix of Semitic and Romance influences, in this paper only data from the Semitic part of the language will be provided, as research on the Romance set of data is the topic of present ongoing research.

That which makes a given language morphologically complex can be measured from a prior expectation which is not met. To analyse our morphologically-complex phenomena along these lines, the canonical typology framework as set out in Corbett (2005, 2007a, 2009, 2011) will be used, which framework has also been applied in the syntactic domain by Polinsky (2003), Seifart (2005), and Suthar (2006) amongst others. Spelling out some of the framework's claims and how its measure of analysis operates, is what follows in §2 below. §3 includes a description of the Maltese verbal paradigm, which will be the locus from where to analyse morphological complexity in Maltese. A segmentation analysis will also be provided, since there has yet been no fixed segmentation account for Maltese. An analysis of non-canonical behaviour, particularly illustrating the non-canonical behaviour of stem-form alternations internal to the paradigm is provided in §4, where it will be postulated that inflection in Maltese is not solely realized by inflectional affixes, but also by the same alternating stem-forms. The study here will build on the work in Corbett & Baerman (2006), Corbett & Baerman (2010), and Baerman & Corbett (2012), where the *lexical* material's real function, as well as the end result brought about by the actual non-canonical behaviour of having non-inert stems will be probed into. In §5 we will then see how complexity internal to the inflectional verbal paradigm can cut across different

binyanim verb-forms in the language. §6 then summarises the key points and concludes the paper.

2. Canonical Typology

Applying a canonical approach to the analysis of language means that definitions of elements, entities, and/or phenomena are taken 'to their logical end point' (Corbett, 2005, p. 25). From there, the language data instances are set against the logical definition/instance, and the *theoretical distance* of the *real instance* from the *canon*, is measured, resulting in a gradience of degrees of non-canonicity (Corbett, 2007, p. 9). The *canonical* illustration functions as a fixed point towards which one can always return to as a standard of measurement, i.e. *the canon*, even though this 'may even be non-existent' (Corbett, 2011a, p. 446). What is then required are measures/dimensions that are able to grade the data accordingly. Morphological complexity can thus be understood as an outcome of the divergence from the *canon*, where the further away from the canonical requirement a given example is, the more non-canonical, and the more morphologically complex it is. Since the focus of this discussion is on the non-canonicity internal to the paradigm, what follows below is a canonical account of what one expects to find in a *canonical paradigm*. The reason for doing so is such that the divergence from canonicity to be illustrated for Maltese in §4 and §5 can be compared in the realm of what one expects to find in this morphological paradigmatic entity.

2.1. Canonical Paradigms

In a canonical paradigmatic system, one would expect to have a product of the multiplication of the features and their values, resulting in the expected total number of cells (refer to Spencer's (2003) notion of *exhaustivity*), each with a distinct word-form (Corbett, 2011b, 2009).[1] In this regard, therefore, a canonical paradigm that realizes four distinct morphosyntactic values, (be they portmanteau or not), is expected to have a structure as in table (1) below. If it happens to be the case that the expected number of cells does not match up with the total number of cells, then violations of the canon would involve *defectiveness* (refer to the references and articles in Baerman et al. 2010) on the one hand, and *overdifferentiation* on the other.[2]

X-a
X-b
X-c
X-d

Table 1: Illustrating the canonical behaviour of a four-celled paradigm

[1] All forms are here understood as surface form structures (see Anderson, 2011).

[2] *Defectiveness* occurs when the exhaustive set of morphosyntactic features in the language, (at least when comparing across the same set/class of lexemes and their verbal paradigms), are multiplied out, the result is such that we get less cells, hence a paradigm which does not include *all* the expected number of cells. Non-canonical *overdifferentiated* paradigms on the other hand are illustrations of paradigms that have additional paradigmatic cells, when one compares the number of cells, representative of the number of features, associated with the rest of the lexicon (Corbett, 2000). Also refer to Gauci & Camilleri (2011) for discussions on this phenomenon in Maltese. When on the other hand different cells do not involve distinct word-forms, and assuming that the features involved are all syntactically relevant, then the non-canonical occurence of *syncretism* is present (Baerman et al., 2005).

The analysis of canonical paradigms falls under the rubric of canonical inflection that is concerned with paradigm-internal behaviour. Internal to the paradigm there is a lexical vs. grammatical material dichotomy. The lexical material, which *should* be the stem, *should not* express any grammatical features and is expected to be inert, non-alternating (Baerman & Corbett 2012: 1). If we consider our simplified canonical paradigm representation in table (1) we can see that the invariable X in all the cells represents the lexical content. On the other hand, the grammatical information usually expressed by the affixal material *should* be distinct in all stems, as illustrated through the four distinct suffixal forms in table (1). While a violation of the distinct affixal material in each cell results in *syncretism* (Baerman et al. 2005), a violation of the inert lexical material canonical requirement results in a stem-form that is not only lexical, but can itself be an exponent of grammatical features, since as long as something displays a change in form within a paradigm, this will, in some way or another serve as an exponent of some kind of morphosyntactic feature or value distinction (Corbett & Baerman 2006, Baerman & Corbett 2010, 2012)**.** As a result of the fact that in places where we ought to have *sameness*, one gets distinct forms, or vice-versa, this is taken to imply an 'increased complexity and/or redundancy' (Corbett, 2009, p. 2).[3] Table (2) below first illustrates a representation of the canonical requirements as reviewed above, and table (3) then illustrates the derivations that result out of this.

Canonicity internal to the paradigm and across lexemes

	Comparison across *cells* of a lexeme	Comparison across *lexemes*
Composition/structure	same	same
Lexical material (stem-shape)	same	different
Affixal material (affix-shapes/ forms)	different	same
Realisational outcome	Different cell-forms	Different cell-forms

Table 2: A representation of canonical inflection internal to the paradigm and across lexemes (Corbett 2011)

	The content of the paradigmatic cell	Deviations	Comparisons across different lexical paradigms	Deviations
Composition/structure	different	fused exponence periphrasis	different	defectiveness overdifferentiation
Lexical material (stem-shape)	different	**stem-alternation**[4] suppletion	same	**heteroclisis**
Affixal material (affix-shapes/ forms)	same	syncretism uninflectability	different	deponency inflectional classes

Table 3: Illustrating the array of non-canonicity in Maltese verbal paradigms (adapted from Corbett 2007b)

Apart from calibrating the actual paradigmatic stem-form behaviour vis-à-vis the canonical requirement, the other dimension to this study includes an analysis that looks

[3] In §4. We will also be looking at another additional dimension to the non-canonical paradigm, following Thornton's (2010, 2011) work on *overabundance*, which involves a cell-internal violation that involves the presence of a number of word-forms in a context where one ought only find one.

[4] The bolded non-canonical behaviours/deviations: stem-alternations and heteroclisis will be among the divergent non-canonical illustrations of morphological complexity that will be discussed in this study.

at stem-behaviour across different lexemes, in analogy to the analysis of non-canonical inflectional classes (Corbett 2009). The different patterns of organisations of stem-form alternations across the different lexemes will be referred to as *stem pattern classes*. Maltese verbs will be classified on the basis of their paradigmatic stem-form behaviour and the stem pattern class they fit in. It is important to note that part of the canonical divergence discussed here, which is independent of any phonological-conditioning, will itself be based on the segmentation analysis provided in §3.2 below.

3. The Maltese verbal paradigm

In this section the Maltese verbal paradigm is described, where some additional non-canonical behaviour, apart from those focused upon in §4 and §5 will be highlighted in §3.1. In §3.2 the segmentation issue will be discussed.

3.1. Getting acquainted

The verbal paradigm in Maltese consists of three sub-paradigms; the indicative perfect and imperfect sub-paradigms and the imperative sub-paradigm.[5] This study will be mainly concerned with the first two sub-paradigms, particularly because the forms in the imperative sub-paradigm are themselves a principal part for the word-forms in the relevant cells of the imperfect sub-paradigm, whereby we are thus dealing with the same set of forms, and which we will not need to represent additionally, here.[6] From the Maltese verbal paradigm representation in table (4), one thus observes that the perfect and imperfect sub-paradigms involve three PERS feature values {1, 2, 3}, and two NUM values {SG and PL}. In the 3rd PERS SG cells there is GEND specification that distinguishes across masculine and feminine values. In the imperative sub-paradigm one only finds two word-forms; one in the 2.SG cell and the other in the 2.PL cell.

Morphosyntactic feature values	kiteb 'write'		
	PERF	IMPERF	IMPERATIVE
1.SG	ktibt	nikteb	
2.SG	ktibt	tikteb	ikteb
3.SG.M	kiteb	jikteb	
3.SG.F	kitbet	tikteb	
1.PL	ktibna	niktbu	
2.PL	ktibtu	tiktbu	iktbu
3.PL	kitbu	jiktbu	

Table 4: The paradigm for *kiteb* 'write'

From table (4) it can already be seen that the stem-form across the different cells and sub-paradigms differs, e.g. *kitb-* in the 3rd PERS feminine cell and in the 3rd PERS PL cell, and *-ktb-* in the imperfect PL cells. Accounting for the pattern of stem-form alternations will be the task in §4.1. Additional non-canonical behaviour one can observe from table (4) is the instance of systematic syncretism across the 1.SG and 2.SG word-forms in the perfect sub-paradigm. Recall from §2.1 that in a canonical paradigm one should expect

[5] Regarding what we have here as aspectual paradigms in the indicative mood, follows the work of Borg (1981, 1988) and Fabri (1995). Refer to Hetzron (1997) for a distinct view on the matter however, who considers these sub-paradigms in Semitic languages to realise temporal feature values: PAST and PRESENT respectively.

[6] There is only one lexical item that does not pattern in this way, and that is COME, whose stem-form in the imperfect SG and imperative SG is *n-i-ġi* 'I come' and *ejja* 'come.SG.IMPER', respectively, involving an instance of suppletion.

different word-forms in the different cells, since each cell is understood as realizing a set of distinct morphosyntactic feature values that differ across the different cells. Furthermore, since the canonical stem is invariant, the part of the word-form that is *expected* to differ is the affixal material. From table (4) one sees that the same suffix *-t* is used across the perfect 1SG and 2SG cells. Following the segmentation account provided below in §3.2, this is taken to illustrate an instance of a directional syncretism whereby the 2.SG form itself also becomes the exponent of the 1.SG values. In parallel to this syncretism in the perfect sub-paradigm, we get a similar non-canonical effect in the imperfect sub-paradigm, this time across the 2.SG and 3.SG.F cells. If we combine both patterns of syncretism, as in table (5) below, one sees that, the PERS and NUM values of the form which intersects both patterns, which offers the base for the directional syncretism in both sub-paradigms, are actually non-autonomous (Corbett 2011a, a term attributed to Zaliznjak 1973). In other words, the 2.SG values never have a unique form within the inflectional paradigm in Maltese.[7]

Morphosyntactic feature values	kiteb 'write'	
	PERF	IMPERF
1.SG	ktibt	nikteb
2.SG	ktibt	tikteb
3.SG.F	kitbet	tikteb

Table 5: The non-autonomous illustration of the combination of the 2nd PERS and SG NUM values

3.2. The segmentation adopted in this study

The segmentation adopted in this study is illustrated in table (6), building upon, but moving away from the segmentation analyses provided in Mifsud (1995), Fabri (2009) and Spagnol (2011). The largest variation is found between the segmentation analysis here, and that of Mifsud's. While his segmentation analysis involves what one may wish to refer to as an inflectional class account for Maltese that essentially splits the inflectional classes on the basis of a broad Semitic vs. non-Semitic lexical split. The segmentation is much simpler, and a coherent aspect of the segmentation here is that the analysis does not present different segmentations depending on whether the lexicon is integrated in the Semitic morphology or not. As a result of this, while Mifsud sets the tradition that Semitic verbs and early integrated Romance loans are based on a consonantal root, and the non-Semitic influenced Romance loans involve paradigms built on bases/stems, my account here invokes no such analytic distinction, where through the presence of just one inflectional verbal class in the language, most of the idiosyncrasy is ascribed to the stem.

Morphosyntactic feature values	PERFECT	IMPERFECT
1.SG	-t	n- ~ m-
2.SG		t-
3.SG.M	ø	j- ~ i-
3.SG.F	-(V)t	t-
1.PL	-na	-u ~ -w
2.PL	-t-u	
3.PL	-u ~ -w	

Table 6: The segmentation to be adopted in this study

[7] It is worth highlighting that it is the combination of the NUM and PERS features which is giving us the non-autonomous combination of SG and 2nd PERS values, as in essence, when we consider the imperative sub-paradigm, the 2nd PERS form is actually autonomous there.

From the segmentation in (6), one observes that Maltese involves suffixes in the perfect sub-paradigm and prefixes and suffixes in the imperfect sub-paradigm. This is in itself a non-canonical manifestation. On the basis of the *cell's composition and structure property* (Corbett 2009, p. 2), in a canonical paradigm one expects that if suffixal material is used in a cell, then the paradigm should retain such a position for the inflectional exponents across all the paradigmatic cells. The perfect sub-paradigm can be considered as canonical in this regard, displaying suffixes throughout, realizing PERS, NUM (and GEND) features. When it comes to the exponents involved, it should here be mentioned that unlike previous analyses, the ø in the perfect 3SGM cell in table (6) does not mean that the existence of zero morphs is being acknowledged here. Rather, the ø should be taken to represent the fact that in the 3SGM cell, it is the stem-form itself that is an exponent of these features, and not any additional affixal material.

What is not found in previous segmentation accounts for the language in table (6) is the additional syncretic exponent we get in the perfect sub-paradigm: the *-t* allomorph in the 3.SG.F cell. Another difference is that while Maltese and Arabic literature regard the *-tu* as a suffix, (refer to Lowenstamm 2011 for example), it is implicitly or explicitly taken for granted that the *t* in *-tu* is the exponent of the 2nd PERS, and the *-u* is an exponent of NUM. In table (6) *-tu* is segmented further, in turn providing a rather neat analysis of the *-t* exponent as a default 2nd PERS in the language, and where the presence of syncretism in the paradigm, it comes to realize other feature values, and depending on ASP, it gets its differing placements, either on the left or right edge of the stem-form. From this segmentation analysis, it is only the exponent *-na* that realizes PERS and NUM cumulatively. The imperfect sub-paradigm, on the other hand, neatly involves PERS-realizing prefixes and NUM-realizing suffixes, when present, and is closer to Fabri's (2009) and Spagnol's (2011) segmentation analysis. The exponent of the PL value alone (*-u~ -w*) is shared across both sub-paradigms.

4. Complexity internal to the Maltese verbal paradigm

What follows in this section is an account which delves deeper into the paradigmatic complexity that does not have to do specifically with the affixal material, but is rather concerned with the stem-form behaviour in a sample of Maltese verbal paradigms. Such an account will provide another dimension to the language's divergence from canonicity. Recall that on the basis of a canonical typology account, as mentioned in §2.1, the stem's role should be that which imparts lexical meaning, and in doing so, it must be inert. As mentioned when discussing the paradigm for *kiteb* 'write' in table (4), Maltese paradigms involve alternating stem-forms. In this section I will show how the alternation that is present cannot be considered random, and can be perceived as an interaction of both a phonological and a systematic output of morphological conditioning. Through the analysis provided, following Camilleri (2012), the stem-form in Maltese is considered to be imparting grammatical information that is realized simultaneously with that which is realized by the inflectional affixes themselves. This claim goes against a number of accounts in the Maltese literature, such as the claim in Spagnol (2011) saying that inflection in Maltese is concatenative. The alternating stem-forms will here be treated as a non-concatenative illustration that reduplicates part or all of the affixes' realization, and are taken to be multiple exponents internal to the word-form. This analytical account will in turn show that it is not the case that verb inflection in the language solely 'involves prefixation and suffixation to a stem-base' (Spagnol, p. 37). Furthermore, this non-concatenative dimension to inflection in Maltese (as well as in other Arabic dialects) comes to show that non-concatenative morphology in Semitic languages is not restricted to the *binyanim* system of verb-form alternations, as often asserted in the literature (refer to Booij 2009, for example). If this is really so, then the non-concatenative analysis makes Semitic languages appear more similar to other languages, such as German, for

example, whose non-concatenative system of ablaut-changes can be considered as analogical to the changes we observe within the non-concatenative system of stem-form alternations in Maltese.

In §4.1 the variation that exists in the stem-form alternation behaviour and the patterns observed across two different verbal bases in the language will be exemplified, which will in turn also illustrate how morphological complexity, at least viewed synchronically, cannot be wholly attributed to phonological constraints, in turn analysing that which is unexplicable to be the outcome of the morphological component. §4.2 then presents a discussion with some representative illustrations of *overabundance* in the language, which will also provide us with some interesting supplementary effects that relate to our stem behaviour analysis.

4.1. Stem patterns

In this section two distinct verbal bases in the language will be discussed.[8] From these two distinct classes of verbs, different patterns formed as a result of distinct stem-alternation behaviours will be shown. We will see however that a distinct stem pattern need not cross-classify with a distinct verbal base type. Rather, different types of distinct behaviour will be shown to exist across the individual members of the different verbal bases. The verbal bases which will be looked at here are the: CVCVC verbal bases, illustrated by *laqat* 'hit' and *ħataf* 'grab', and the CV:C type, illustrated by the verbs *mar* 'go' and *żar* 'visit'. There are a number of reasons why these two verbal bases were chosen. Interestingly they manifest distinct illustrations of stem-form behaviour across lexemes of the same type. Through the CVCVC verbal base set it will be shown how verbs of the same type can involve a different sub-pattern of stem-form alternations, which however retain a co-membership in the same stem pattern class. In the case of the CV:C verbs, we will see that the lexemes chosen here do not solely display a distinct sub-pattern of alternation, but rather belong to distinct stem pattern classes altogether. Another distinction associated with the choice of the different verbal bases is also interesting in that in terms of their traditional underlying representation, these differ. A distinction cross these verbal base types based on the nature of their triconsonantal underlying representation will not be pursued here. It we will in fact be shown that this underlying representation does not hold, when based upon surface-form data. The CVCVC set is traditionally considered to belong in the strong *class* of verbs, which do not include a *w/j* radical in their UR, while the CV:C-verbal-base-classified verbs are analysed as *weak* since they do not involve a *w/j* radical, which for this set of *weak* verbs happens to be in the medial position. As will be shown, the reasons why a triconsonantal underlying representation analysis is not upheld here is essentially because it is stem-forms that are in focus here, as we will see a number of discrepancies across what is said to be the underlying representation against what is actually found at the inflectional paradigm, exists. However, the stem-form, under a consonant-root based account can be conceived as outputs of mechanisms that apply on a consonantal root (McCarthy 1982, Fabri 2009), which in turn build up stem-forms and lexical items (e.g. refer to Müller's 2009 account for the Maltese lexicon).

While the analysis of stem patterns formed by a pattern/organisation of internal stem allomorphy requires us to look closely at phonology to see how it conditions stem-forms in the paradigm, phonological facts will not be delved into deeply here, as this would require that we focus on other elements which are not the subject of the discussion in this paper. The notion of the stem pattern class will here be analysed further, and the stem-form is considered as an output available for scrutiny, without

[8] With verbal bases, what I mean here is the phonological shape of the surface base; such that *kiteb* 'write' represented in table (4) belongs to the CVCVC verbal base.

delving in unnecessary detail as to how this pattern comes about, and what forces are responsible for this. It is what is clearly inexplicable, and the effect/consequence of an autonomous morphological layer that will be mostly dealt with and given due attention.

4.1.1. Comparing across CVCVC verbal-based verbs

If we consider the paradigms of the verbs *laqat* 'hit' and *ħataf* 'grab' in table (7) below, we see that notwithstanding the same phonological properties, these differ.

Morphosyntactic Feature values	*laqat* 'hit'		*ħataf* 'grab'	
	PERFECT	IMPERFECT	PERFECT	IMPERFECT
1SG	lqat-t	n-o-lqot	ħtaf-t	n-a-ħtaf
2SG	lqat-t	t-o-lqot	ħtaf-t	t-a-ħtaf
3SGM	laqat	j-o-lqot	ħataf	j-a-ħtaf
3SGF	laqt-et	t-o-lqot	ħatf-et	t-a-ħtaf
1PL	lqat-na	n-o-lqt-u	ħtaf-na	n-a-ħtf-u
2PL	lqat-t-u	t-o-lqt-u	ħtaf-t-u	t-a-ħtf-u
3PL	laqt-u	j-o-lqt-u	ħatf-u	j-a-ħtf-u

Table 7: The paradigms for *laqat* and *ħataf*

These two verbs do not just share the same verbal base, but they also belong to the same ablaut class, i.e. *a-a*.[9] Notwithstanding the difference across the two verbal paradigms, which has to do with the number of stem-forms present, and whether there is any redundant morphological interventions involved, as we will see below, there is however a unifying pattern across the two verbs. This pattern is what we are here referring to as the *stem pattern class*, > i.e. which comes about as a result of the way in which the different morphosyntactic features are conflated within the individual sub-paradigms on the basis of the stem-form alternations and feature value conflations. The stem pattern class represented by the verbs in table (7) conflates the 1^2 cells in the perfect sub-paradigm.[10] It also involves a distinct 3SGM stem-form, as well as a stem-form conflation across the 3SGF^3PL cells. The imperfect sub-paradigm, on the other hand, involves a stem-form alternation that is NUM-based, when we set our data against Corbett & Baerman's (2012) typology of paradigmatic stem-form splits. The pattern that results involves five slots across the whole paradigm. These five slots are split (3 vs. 2) on the basis of an ASP distinction. The abstracted stem pattern class can be represented as in table (8) below.

[9] What is meant by ablaut class *a-a* here is the vocalic pattern in the perfect 3SGM stem/word-form. Note that this differs from the Arabic tradition. An *a-a* classification of CVCVCa verbal bases in Classical Arabic is not used to refer to the 3SGM's vocalic pattern. Rather, *a-a* in the Arabic trandition refers to the V_2 in the 3SGM stem/word-form and the stem-vowel in the imperfect sub-paradigm, which may involve an ablaut-change. The 3SGM's V_1 is not given much importance in Classical Arabic, as this is always an invariable *a*. Hence, as a result of the possible V_2 differences across the Classical Arabic verbal lexicon, the ablaut classes available are *a-a kataba* 'write', *a-i xariba* 'drink', and *a-u jabuna* 'act cowardly'. In Maltese, specifying both Vs within a given two-voweled verbal base may entail a different paradigmatic behaviour. In the case of the CVCCVC verbal base type, on the other hand, knowledge of the V_1 is irrelevant, in that nothing hinges upon it. Following the analysis of the two verbs in table (7), we will eventually end up with a new analysis of Maltese that does not solely consider the ablaut class, but which provides us with an analysis that brings us closer to that of Classical Arabic. It will be shown that belonging to the same ablaut class may involve further sub-classifications, and these are dependent on the nature of the stem-vowel in the IMPERF sub-paradigm.

[10] It is here interesting to see that in terms of word-forms we initially had a systematic word-form syncretism across the perfect 1^2 SG cells, which conflation then extends across both the SG and PL cells that realize PERS 1^2, when the stem-form analysis is involved.

Paradigmatic slot distribution

PERFECT		IMPERFECT	
1^2	1	SG	4
3SGM	2		
3SGF	3	PL	5
3PL[11]			

Table 8: Representing the *stem pattern class* in which all the CVCVC verbal base set members belong

The stem-form split in the imperfect sub-paradigm is based on a SG vs. PL NUM value distinction. In the perfect sub-paradigm, on the other hand, the split is less coherent, in that while the PERS 1^2 values conflate together, the 3rd PERS cells do not form a natural class that displays the same stem-form in all the cells, at least in this type of verbal base. While the stem-form in the 3SGM cell realizes the exact same features as those realized by the inflectional affixes (refer to Baerman & Corbett 2010), on the contrary, what we have across the 3SGF and 3PL cells is a morphomic stem-form that conflates these PERS, NUM, GEND, (as well as ASP) feature values together.

In terms of the schema in table (8), what differences we have across the two verbs is such that while the *laqat* paradigm has five distinct stem-forms to fill in the five-slotted paradigmatic pattern, the *ħataf* paradigm only has four. The difference is attributed to the fact that while *laqat* has a separate stem-form in all five slots, *ħataf* involves a syncretic stem-form that cuts across slots 1 and 4 (-*ħrab*-). This distinction comes about as a result of an ablaut-change in the stem-vowel of the imperfect sub-paradigm's stem-forms in the *laqat* paradigm. Instead of sharing a stem-form across the imperfect SG cells and the perfect 1^2 cells, as is the case in *ħataf*, which implies that there is no phonological motivation for the change, we get a redundant perfect 3SGM V_2 ablaut-change from *a* to *o*. From this redundant distinction across the two verbs, we end up with what we can refer to as the *a-a – a* vs. the *a-a – o a-a* ablaut class verb sub-sets, paralleling analyses of Classical Arabic verbal taxonomy, where verbs are sub-classified in terms of the imperfect stem-vowel, apart from the ablaut-class distinction classification. As a consequence, through the stem-form -*lqot* in slot 4, instead of the expected -*lqat*-, (since this has the same stem-shape as the stem-form in slot 1), the *laqat* paradigm comes to realize ASP and NUM features through its imperfect SG stem-form, unlike the morphomic stem-form in the *ħarab* paradigm. In the imperfect sub-paradigm, the ASP feature is realized both by the stem and the inflectional affixes, and hence in Baerman and Corbett's (2010) typology, the feature is shared. In the case of the NUM feature, the SG value is realized solely by the stem-form. This substantiates my analysis in §3.2 that no zero-morph analysis is being upheld in this study, but rather, the absence of any affixal exponent is taken to imply that the stem-form is the exponent itself, and contributes to the feature realizations. The PL value is realized by both the stem-form and the -*u* suffix, although the stem-form in these cells also realizes ASP, something which the -*u* does not. Recall that this is because from the segmentation analysis proposed in table (6), the -*u* is shared across the sub-paradigms, implying that the suffix only realizes NUM out of the set of features realized by the stem-form. In the imperfect sub-paradigm, the prefixes realize PERS and ASP.[12] In fact there appears to be a tendency

[11] The reason why the perfect 3SGF and 3PL cells have not been conflated, as is the case with the perfect 1^2 cells is because they do not form a natural class, and in fact this conflation need not be the case in other paradigms.

[12] The question which I leave unresolved is whether one can consider the imperfect *t*- prefix as being solely an exponent of PERS across both paradigms, and then it is solely when surfacing with an imperative principal part, instead of the perfect 3SGM one, that it then comes to surface at one edge of the stem-form instead of the other.

for the stem-form to carry more grammatical information than the individual affixal exponents, (except where the stem is morphomic) In the case of *ħataf*, the syncretic stem-form across slots 1 and 4 results in a morphomic exponence where the imperfect SG and perfect 1^2 values are realized simultaneously in a conflated manner.

The presence or absence of a redundant morphologically-induced stem-form alternation illustrated through ablaut-changes, is what renders the difference between a four-slotted or five-slotted paradigm, at least in the case of these two verbs. This additional stem-form increases the complexity of the type being discussed here, further adding to the non-canonical behaviour, in terms of our analysis within the canonical typology framework. This is because having an extra redundant stem-form moves the stem-form behaviour further away from the canonical state of inertness. At the same time, however, this results in a better mapping across the actual number of stem-forms within the paradigm and the number of slots designated by the *stem pattern class* itself. Furthermore, this can also be thought of as morphology's drive towards more coherent feature realizations, i.e. the realization of natural class features, whereby morphology's redundant intervention acts as a means with which to avoid getting morphomic exponence, which we would have otherwise had, as is the case in the *ħarab* paradigm. By this simple comparison across these two verbs, apart from illustrating the intricate nature of the morphological component, which is rather loosely related with phonology, and is that which conditions the further gradience away from the canon, we have seen that having the same phonological properties does not entail sameness, in terms of paradigmatic behaviour; hence a divergence from what one expects to be the case across lexemes of the same type. Furthermore, a *stem pattern class* membership does not entail that all members involve the same stem-form alternations. It is rather the organisations of these stem-forms in the pattern's designated slots that render their co-membership within the same *stem pattern class*. This divergence away from the canon, and the different behaviours across apparently same members will also be explored when comparing across the verbs *mar* 'go' and *żar* 'visit' below.

4.1.2. Comparing across CV:C verbal-based verbs

The verbs, *mar* 'go' and *żar* 'visit', while displaying the same phonological properties, as shown in table (9), have conflicting statuses in traditional grammar.

Morphosyntactic feature values	*mar* 'go'		*żar* 'visit'	
PERF	PERFECT	IMPERFECT	PERFECT	IMPERFECT
1SG	mor-t	m-mūr	żor-t	n-żūr
2SG	mor-t	t-mūr	żor-t	ż-żūr
3SGM	mār	j-mūr	żār	j-żūr
3SGF	marr-et	t-mūr	żār-et	ż-żūr
1PL	mor-na	m-morr-u	żor-na	n-żūr-u
2PL	mor-t-u	t-morr-u	żor-t-u	ż-żūr-u
3PL	marr-u	j-morr-u	żār-u	j-żūr-u

Table 9: The paradigms for *mar* and *żar*

Under a consonantal-root based account, both verbs are treated without distinction, and are classified as *weak*-hollow verbs, i.e. having a *weak* consonant in their underlying consonantal-root account, *żar* is traditionally said to involve a *weak-j* medial radical, and *mar* a *w*. Sutcliffe (1936: 138) however also treats *mar* as irregular, saying that it does not behave like the rest of its class. The notion of irregularity in the grammars that follow Sutcliffe, such as that of Borg & Azzopardi-Alexander (1997), and pedagogical grammars, differs from that applied in Sutcliffe, and thus, *mar*, in these grammars, is not regarded as *irregular*, and is classified with the rest of the CV:C verbal base class, as we will also be

referring to it here. From this surface-based representation, what we find is that *mar* does in fact pattern distinctly from *żar* in terms of its paradigmatic stem-form behaviour. Having said this, it will not be considered as *irregular*, as Sutcliffe considers it to be. Rather, it is only the case that it displays exceptional behaviour in its verbal base set.

If we consider these two verbs' paradigms, we see that while the pattern of stem-form alternations in *mar* is the same as that of the verbs of the CVCVC verbal base set in table (8), particularly patterning the *laqat* sub-type, with five stem-forms fitting in the five-slotted organisation of stem-form alternations, in the case of *żar*, the stem pattern employed is shown in table (10) below, which involves an invariable stem-form in the imperfect sub-paradigm, and a PERS-based split in the perfect sub-paradigm.

Paradigmatic slot distribution

PERFECT		IMPERFECT	
1^2	1	SG	
3	2		3
		PL	

Table 10: Representing the stem pattern across the CV:C verbal base set

What we see therefore is that in the *żar* paradigm, although the syllable-structure across the 3rd PERS cells in the perfect sub-paradigm and in the imperfect sub-paradigmatic cells is the same: CV:C, once again we see a morphological effect, such that, an ablaut-change is involved, where the perfect 3SGM vowel redundantly changes to *ū*. As was the case in the ablaut-changes across the perfect 1^2 and imperfect SG cells in the *laqat* paradigm, the change renders a more feature coherent stem-form realization, instead of the morphomic exponence we would have otherwise had. Thus while the stem-form *żār* realizes perfect 3rd PERS, *żūr* realizes imperfect ASP and SG NUM. The ASP feature is hence realized by multiple exponents, as this is also the function of the prefixes, which also carry a PERS feature (refer to Camilleri *forthcoming*). The ablaut-changes taking place within the paradigm for *mar* parallel those discussed for *laqat*, except that in terms of stem-shapes we have a heteroclite paradigm, where the stem-shape of the perfect 1^2 and 3SGM cells, as well as the imperfect SG, are the ones expected for a CV:C verbal base, whereas the CVCC stem-shape across the perfect 3SGF^3PL and imperfect PL cells patterns with CVCVC verbal base types that involve a resonant as their second stem-form consonant.

Mar 'go' is the only exception in this CV:C verbal-based set, and there is no available synchronic explanation as to why it patterns differently. In doing so, it is still not treated as *irregular*, unlike Sutcliffe's (1936) treatment. The reason for this is because *irregularity* is here considered to have to do solely with when a given stem pattern class only involves one lexeme as its member. Consequently, a lexeme is *irregular* if it displays a unique stem pattern class which differs from the other typical stem pattern classes. For this reason, *mar* is not *irregular* in this regard, since it patterns with what appears to be the most common stem pattern class in the language, when one considers all that we have in the Semitic verbal data. The complexity provided here is to show that it is not only the case that we may have a different organisatory pattern within the same stem pattern class in which *laqat* and *ħataf* are co-members. Rather, what additional complexity we have here across *mar* and *żar* is that although phonologically identical and belonging in the same verbal base set, these verbs participate in distinct stem pattern classes altogether. *Mar* patterns with *laqat*, as in the stem pattern displayed in table (9), whereas *żar* displays its own pattern, as in table (10). Morphological complexity is thus manifest rather clearly when different behaviours are present across verbs with phonological sameness. Furthermore, it is interesting to see that a pattern of stem-form alternations need not cross-classify a given verbal base type, and a given stem pattern

class or sub-pattern of stem-alternations internal to that class may cut across different verbal bases.

4.2. Overabundance

An additional dimension to the canonical paradigm that results in a further divergence from the canon, is the phenomenon of *overabundance*, given most prominence in Thornton (2010, 2011).[13] This non-canonical phenomenon is present when there are 'two or more forms realizing the same cell in an inflected paradigm' (Thornton, 2011: 362). In a canonical paradigm one expects to find one word-form filling in a paradigmatic cell. From this definition we see that her focus is mostly on word-form overabundance. In the account provided here it will be shown that Maltese illustrates a case of overabundant word-forms that are derived as a result of stem-form overabundance.[14] This means that there are different patterns of overabundance, and such patterns in Maltese can combine in different ways, resulting in different word-forms altogether. Table (11) below provides a representative but non-exhaustive illustration of stem-form overabundance in two different verbal base types: the CVCC verbal base, represented by *ħass* 'feel', and the CV:C verbal base, represented by *sam*. Note that the stem-overabundance being illustrated here in the different verbal bases does not entail that all members of these verbal bases should have the same overabundant pattern. Rather, to further add to the complexity, it is somewhat of a lexical idiosyncrasy to see whether a given lexeme's paradigm within these verbal bases will actually involve overabundance or not, and whether overabundance is present in all the cells that display this phenomenon in other verbal paradigms, when it does.

Morphosyntactic feature values	*ħass* 'feel'		*sam* 'fast'	
	PERFECT	IMPERFECT	PERFECT	IMPERFECT
1SG	ħassej-t	n-ħoss	som-t ~ somej-t	n-sūm
2SG	ħassej-t	t-ħoss	som-t ~ somej-t	s-sūm
3SGM	ħass	j-ħoss	sām	j-sūm
3SGF	ħass-et	t-ħoss-u	sām-et	s-sūm
1PL	ħassej-na	n-ħoss-u	som-na ~ somej-na	n-sūm-u
2PL	ħassej-t-u	t-ħoss-u	som-t-u ~ somej-t-u	s-sūm-u
3PL	ħass-u ~ ħassē-w	j-ħoss-u	sām-u ~ samē-w	j-sūm-u

Table 11: The overabundant paradigmatic cells in the paradigms for *ħass* and *sam*

If we consider the overabundance in *ħass* we see that the target for overabundance is the perfect 3PL cell. At a glance we can already see that this targeting is morphologically-conditioned, in the sense that one cannot explain why the availability of overabundance does not target the imperfect PL stem-form as well, considering that the same stem-shape and the same *-u* suffix is involved. Therefore, while we get *ħassu* ~ *ħassew* we do

[13] Cappellaro (2010, 2012), has also worked on overabundance, where however she mostly focuses on overabundance in Italian.

[14] Although word-form overabundance within the paradigm will not be considered here, Maltese does allow for this, as shown in the the three-fold possibility in the IMPERF PL cells, of the paradigm for *marad* 'be sick', for example: j-i-mird-u (most common form) ~ j-i-mord-u (9 *google* hits) ~ j-o-mord-u (5 *google* hits), where although the latter two appear to be the least common forms, assuming that the *google* hit numbers may be taken as representative of their use in spoken and written language, these are still forms available at the native speakers' disposal. While the last two forms do not involve stem-form overabundance, they differ on the basis of the formative vowel, *o* vs. *i*, which in turn results in word-form overabundance. The difference across the first and last two word-forms displays a case of stem-form overabundance, similar to what will be discussed here.

not get *jħossu ~ *jħossew*, even if nothing hinders this from taking place. From the stem-alternation internal to the perfect PL cell, one may wish to argue that the alternation is not as redundant as one may want to assume. One may want to say that the trigger is phonological, where phonology tries to adjust the stem-shape, in turn resulting in the allomorphic suffix-form changes from *-w* to *-u*. Although re-shaping is required, as we cannot have *CCC cluster, (**ħassw*), a lengthened V: is inserted. While the allomorphic difference is phonologically-conditioned, this phonological conditioning is only triggered by the same redundant morphological allomorphic change.

Within the paradigms in table (11) we have a number of divergences taking place. As a result of the presence of overabundance, additional stem-forms are introduced, which in turn render a different stem pattern altogether, where from a three-slotted stem pattern for both the CVCC and CV:C verbal bases, we end up with an extension/expansion of the number of paradigmatic slots, illustrating another drive towards further non-canonicity. All this therefore also implies that the stem pattern is not fixed. Rather, it changes and varies. The paradigm for *ħass*, when this does not involve stem-form overabundance, patterns with that of *żar* 'visit' in table (9), shared by most of the members of the CV:C verbal base set. When overabundant cells figure in our paradigmatic analysis, we get the pattern in table (12), whereby the stem-form in the 3rd PERS cells in the perfect sub-paradigm does not solely realize the PERS feature, but also comes to realize NUM, hence adding another feature that is realized by the stem-form, which is however shared with the suffixal NUM-realizing material, when present. Thus, it is not only the case that we have an additional stem-form, adding to the non-canonical behaviour in a rather redundant manner, but furthermore, we also see that the stem-form comes to realize additional grammatical information. This is in fact what we also get in the case of *sam*, even though this belongs in a distinct verbal base set and involves additional overabundant cells.[15]

Paradigmatic slot distribution

PERFECT		IMPERFECT	
1^2	1	SG	
3SG	2		4
3PL	3	PL	

Table 12: Representing the new stem pattern of feature value organisation that results as a consequence of the non-canonical overabundance present in the paradigm

What I wanted to display, particularly through the paradigm for *sam* is that the set of verbs that pattern with it display two paradigmatic instances of stem-form overabundance; one in the perfect 3PL cell, as is also the case with *ħass*, along with an additional overabundant stem-form across the perfect 1^2 cells. It is somewhat interesting, and perhaps also pointing towards a morphologically complex network, to see that across the perfect 1^2 cells, what we have is a morphologically-triggered stem-extension whose requirement cannot be explained phonologically, since unlike what happens in the perfect 3PL cell, allomorphy was involved, in turn resulting in a partial phonological conditioning, as explained above. This redundant *ej* stem-form extension may itself well be the result of the form's analogous modelling based on other paradigms and verbal bases, which need not concern us here. Note that apart from being a clear illustration of a morphologically-conditioned stem-form overabundance, it also illustrates the way in which the morphological component appears to distinguish across the paradigmatic cells, such that while overabundance in the perfect 3PL cell results in a

[15] Note that the shifting of the paradigm's stem pattern class is not a rare and one off occurrence across verbal paradigms in Maltese. Stem pattern classes may shift freely depending on whether bound pronouns are present, and/or the paradigm's polarity.

stem pattern class shift, the stem pattern is not affected by an overabundant stem-form in the PERF 1^2 cells.

4.3. Summary

This section has shown that morphological complexity exists independently of phonological sameness and independent of morphology's own requirement and stipulations, as shown through the redundant stem-form extensions, and the ablaut-changes across stem-forms, leading to overabundance which only targets specific cells, even though other cells could have also been targeted, but in fact, are not. Furthermore, while stem patterns cut across distinct verbal base types, same verbal-based members may pattern distinctly, either by belonging to a separate stem pattern class altogether, or by involving a distinct stem-form realization of the same stem pattern class, as shown to be the case across *laqat* and *ħataf*. From the data it was also shown that having overabundance in the different cells results in different behaviours. The stem pattern is only affected when we have overabundance in the 3PL cell, which makes all of this further morphologically-complex, in that, overabundance-induced stem pattern class shifts are only related with a particular cell, and not with all of the overabundant cells present in the paradigm.

5. The Maltese *binyanim* system

This section considers the *binyanim* system and illustrates an instance of canonical divergence that takes place within it, which just as with the paradigmatic complexity described above, has never been discussed before in the literature on Maltese. The presence of a *binyanim* system, i.e. the templatic construction of verb-forms, is what has long characterised Maltese as a Semitic language along with its genealogical descendent Arabic (Comrie, 2009). The *binyanim* system has traditionally been considered as an illustration of a derivational morphological system.[16] The aim of this section is to present data exhibiting the phenomenon of heteroclisis (§5.1), and the interaction of heteroclisis along with overabundance, in (§5.2), which introduce other diverse non-canonical behaviours in the language. Heteroclisis is 'the property of a lexeme whose inflectional paradigm contains forms built on stems belonging to two or more distinct inflectional classes' (Stump, 2006, p. 278). Through an illustration of such a morphologically complex instance, a challenge to derivational accounts of the *binyanim* system is provided. This problematic issue is raised when the inflectional paradigm of an idiosyncratic lexeme in a given *binyan* may in fact involve word-forms from another *binyan*, either in the imperfect sub-paradigm, or in different cells within the perfect sub-paradigm. We will see that the ASP-cloven paradigm, i.e. a stem-alternation that splits on the basis of an ASP-feature, parallels an instance that takes place across the Hebrew *binyanim* system for the verb *approach*, as mentioned in Stump (2006, p. 314). Following these paradigmatic accounts, we will then see what effects, if any, there will be on the syntax, when this complexity interacts with argument-structure alternations themselves.

5.1. Inflection across *binyanim*

The first paradigm which we will be dealing with is that of *sieħ* 'call someone', found in the dialect of Naxxar, but obsolete in the Standard variety. From table (13) below, we see that the perfect sub-paradigm involves stem-forms related with the Ist *binyan* lexeme

[16] While we will here not be delving in this argument, for a more detailed account of the system in Maltese, the reader is referred to Borg (1988), Borg & Mifsud (1999), Hoberman & Aronoff (2003), and Spagnol (2011).

sieħ, while the imperfect sub-paradigm involves semi-suppleted stem-forms that belong to the IInd *binyan* counterpart *sejjaħ* 'call out to someone'. The variation across these two forms, under a traditional derivational account, is analysed as the formation of distinct lexemes. The *binyanim* variation, in our analysis here is considered as a mere morphophonological difference, Ist *binyan* CV:C stem-form may alternate with a IInd *banyan* CVCCVC stem-form, which allomorphy results in a different derivationally related lexeme. When considering the imperfect 1SG cell for example, one sees that there is no phonological explanation as to why the form **nsieh* is not possible, at least synchronically. It may have existed in earlier phases of the language, but became obsolete, paving the path for the IInd *binyan* stem-forms to take over. What we have here is a case whereby IInd *binyan* stem-forms fit inside the Ist *binyan* paradigm. In the verbal instance that will follow, we will have the opposite taking place, where Ist *binyan* forms are fitting within a IInd *binyan* paradigm.

Morphosyntactic features values	*sieħ* 'call someone' PERFECT	IMPERFECT
1SG	siħ-t	n-sejjaħ ~ *n-sieħ
2SG	siħ-t	s-sejjaħ
3SGM	sieħ	j-sejjaħ
3SGF	sieħ-et	s-sejjaħ
1PL	siħ-na	n-sejħ-u
2PL	siħ-t-u	s-sejħ-u
3PL	sieħ-u	j-sejħ-u

Table 13: The paradigm for dialectal *sieħ* 'call someone'

Before discussing what is going on in the dialectal paradigm of *sieħ* 'call someone', tables (14-15) represent the respective Ist *binyan* and IInd *binyan* paradigm of the verb *bies* 'kiss', which patterns in the same verbal base as *sieħ*, i.e. a CV:C verbal base, to show what one actually finds in a non-heteroclite paradigm of lexemes of the same verbal base type within the same *binyan*.

Morphosyntactic features values	*bies* 'kiss someone' PERFECT	IMPERFECT
1SG	bis-t	n-bus
2SG	bis-t	t-bus
3SGM	bies	j-bus
3SGF	bies-et	t-bus
1PL	bis-na	n-bus-u
2PL	bis-t-u	t-bus-u
3PL	bies-u	j-bus-u

Table 14: The paradigm for Ist *binyan bies* 'kiss someone'

Morphosyntactic features values	*bewwes* 'kiss' PERFECT	IMPERFECT
1SG	bewwis-t	n-bewwes
2SG	bewwis-t	t-bewwes
3SGM	bewwes	j-bewwes
3SGF	bews-et	t-bewwes
1PL	bewwis-na	n-bews-u
2PL	bewwis-t-u	t-bews-u
3PL	bews-u	j-bews-u

Table 15: The paradigm for IInd *binyan bewwes* 'kiss'

As a result of the heteroclite paradigm in table (13), that involves stem-forms from distinct verbal bases (as a consequence of belonging to the different *binyanim*); CV:C for the Ist *binyan sieħ* and CVCCVC for the IInd *binyan sejjaħ*, we do not solely end up with

heteroclite paradigmatic forms, but we also end up with a heteroclite stem pattern. The perfect sub-paradigm's pattern of stem-form alternations is what one would expect to find given a CV:C verbal base in the language, as displayed for *żar* 'visit' (table 9), *sam* 'fast' (table 11), and *bies* 'kiss' (table 14) above, where the sub-paradigm involves a neat PERS-based stem-form split. In the imperfect sub-paradigm, on the other hand, instead of the expected invariable stem-form, as is the case for the CV:C verbal base set (with the exception of *mar* 'go', as mentioned above), we have a pattern of stem-form alternations that is the same as that which we had in the CVCVC verbal base set in table (8), which also extends for *mar* and other non-CVCVC-verbal-based verbs that pattern in the same way. The pattern of stem-form alternations in the IInd *binyan* also happens to be the IInd *binyan* pattern of CV:C Ist *binyan* counterparts, as displayed in table (15).[17] The heteroclite stem pattern that results is illustrated in table (16) below. It exhibits a rather neat feature-based split within both sub-paradigms, showing a 1^2 vs. 3rd PERS-based distinction in the perfect sub-paradigm and a SG vs. PL NUM-based distinction in the imperfect sub-paradigm, all embedded within an ASP morphosemantic split. Recall that we would not have had this pattern, were it not due to the presence of the morphologically complex and divergent illustration of heteroclisis in this paradigm. In resulting in more feature-coherent stem-forms than morphomic ones, heteroclisis also results in the addition of a stem-form within the paradigm, when one compares *sieħ* with the rest of the CV:C verbal base set, at least if we keep excluding *mar*. All this results in additional non-canonicity, not only on the basis of the way it includes stem-forms from other paradigms, but also in that it has an additional stem-form in the imperfect sub-paradigm, if we measure complexity on the basis of how many stem-forms exist in a lexeme's paradigm, and considering that in theory nothing hinders a CV:C-shaped invariable stem-form across the imperfect sub-paradigm cells. Furthermore, the additional stem-form in the imperfect sub-paradigm does not solely realize ASP grammatical information, but also NUM.

Paradigmatic slot distribution

PERFECT		IMPERFECT	
1^2	1	SG	3
3	2		
		PL	4

Table 16: Representing the heteroclite stem pattern for the heteroclite *sieħ* paradigm

What one needs to add here is that the difference across the Ist and IInd *binyan* word-forms *sieħ* and *sejjaħ* is solely formal, in that there is really no syntactic or semantic distinction or argument-structure differences across these two verbal forms, (though this may not have been the case diachronically). This synchronic state of affairs has resulted in an optionally overabundant perfect sub-paradigm. It is important to mention here that it is not because we have no difference in the argument-structure alternation that we get overabundance. As we will see in the paradigm for *ħabbeb* 'cause to love/befriend' below in §5.2, we still get overabundant cells, even though we have an argument-structure distinction across the stem-forms from the different *binyanim* being used. This hence presents us with a paradigm in (17), which Corbett (2011) would refer to as an instance of a higher order exceptionality.

[17] Under this account here, no *binyan* distinction needs to be made across Ist *binyan* CVCVC verbs and IInd *binyan* consonant-final verbal bases, considering that CVCVC and CVCCVC verbal bases share the same pattern of stem-form alternations, and hence, irrespective of consonantal root representations or templatic formations, morphology merely considers phonological bases, and how to get to the paradigm, accordingly.

Morphosyntactic feature values	*sieħ* 'call someone' PERFECT	IMPERFECT
1SG	siħ-t ~ sejjaħ-t	n-sejjaħ
2SG	siħ-t ~ sejjaħ-t	s-sejjaħ
3SGM	sieħ ~ sejjaħ	j-sejjaħ
3SGF	sieħ-et ~ sejħ-et	s-sejjaħ
1PL	siħ-na ~ sejjaħ-na	n-sejħ-u
2PL	siħ-t-u ~ sejjaħ-t-u	s-sejħ-u
3PL	sieħ-u ~ sejħ-u	j-sejħ-u

Table 17: The overabundant paradigm for dialectal *sieħ*

Just as exhibited in §4.2 for *ħass* 'feel' and *sam* 'fast', this overabundance results in a different pattern of stem-form alternations based on the way in which the distinct morphosyntactic feature values are conflated across stem-forms. Thus we see that in parallel to the PERS-based stem-split in the perfect sub-paradigm, we also have an alternating CVCVC-based stem pattern of alternation, paralleling that which was displayed in table (8), involving: 1^2, 3SGF^3PL and 3SGM feature value conflations. From this paradigmatic stage, one may want to say that just as in the Standard variety, the I[st] *binyan* form has become obsolete, one may hypothesise that this overabundant stage is intermediary and is the stage that precedes the actual loss of the I[st] *binyan* form altogether in the dialect, which would result in the paradigm's levelling, where it becomes entirely a II[nd] *binyan* paradigm.

5.2 Heteroclisis, overabundance and argument-structure alternations

What follows below is the overabundant paradigm of the II[nd] *binyan* verb-form *ħabbeb* 'cause to love/befriend' (table 18). For expository purposes, the I[st] *binyan* counterpart *ħabb* 'love' is provided below in table (19).

Morphosyntactic feature values	*ħabbeb* 'cause to love someone' PERFECT	IMPERFECT
1SG	ħabbib-t II ~ ħabbej-t I	n-ħabbeb II ~ *n-ħobb I
2SG	ħabbib-t ~ ħabbej-t	t-ħabbeb
3SGM	ħabbeb II	j-ħabbeb
3SGF	ħabb-et I/II	t-ħabbeb
1PL	ħabbib-na II ~ ħabbej-na I	n-ħabb-u
2PL	ħabbib-t-u ~ ħabbej-t-u	t-ħabb-u
3PL	ħabbē-w I/II[18]	j-ħabb-u

Table 18: The overabundant paradigm of the II[nd] *binyan ħabbeb* 'cause to love someone'

Morphosyntactic feature values	*ħabb* 'love someone' PERFECT	IMPERFECT
1SG	ħabbej-t	n-ħobb
2SG	ħabbej-t	t-ħobb
3SGM	ħabb	j-ħobb

[18] The stem-form in this cell illustrates another occurrence of interesting morphological complexity, where while I[st] *binyan ħabb* 'love' patterns just like *ħass* 'feel' in table (11), involving stem-form overabundance in the perfect 3PL cell: *ħabbu ~ ħabbew* 'they love', when it comes to the II[nd] *binyan*, it is only *ħabbew* that is used, and an overabundant stem-form is not allowed, in turn implying that the presence of overabundance, as well as a given stem-form instead of another can give morphological cues for a distinct argument-structure, which would have otherwise been ambiguous. Furthermore, a unifying factor across the I[st] and II[nd] *binyanim* paradigms in this regard, at least when comparing across the verbs *ħabb* 'love' and *ħabbeb* 'cause to love/befriend', is that in the presence of an attached pronoun, in the perfect 3PL cell, it is only the stem-form *ħabbē-* that can be used, and not *ħabb-*; *ħabbew-h ~ *ħabbu-h* 'they loved him'.

3SGF	ħabb-et	t-ħobb
1PL	ħabbej-na	n-ħobb-u
2PL	ħabbej-t-u	t-ħobb-u
3PL	ħabb-u ~ ħabbē-w	j-ħobb-u

Table 19: The paradigm of the Ist *binyan ħabb* 'love'

What we can see from the overabundant paradigm in table (18) is that if we exclude the overabundant state of affairs, this IInd *binyan* paradigm already involves stem-forms/word-forms which are shared with those in the Ist *binyan* paradigm counterpart, as one can see when comparing table (18) and (19), facilitated by the use of the roman numerals I and II, next to the word-form in the different cells, as is the case with the morphologically ambiguous forms in the 3SGF and 3PL cells. What happens as a result of stem-form overabundance is that all the cells in the perfect sub-paradigm, with the strict exception of the 3SGM form, which bears the verbal-base-stem-shape related with the given IInd *binyan*: CVCCV(C), we get quasi-levelling in the use of the Ist *binyan* stem-/word-forms across all the paradigmatic cells, whereby when the overabundant Ist *binyan* forms are used in the IInd *binyan* paradigmatic context, morphological ambiguity is increased. It is once again interesting to see that the presence of overabundant stem-forms across the perfect 1^2 cells, as was also shown to be the case for the overabundant *sam* 'fast' paradigm in table (11), do not result in a stem pattern class shift. Recall that in the overabundant *sieħ* 'call someone' paradigm in §5.2 we had a stem pattern class shift as a consequence of having all perfect paradigmatic cells being the target for overabundance, also mentioned in §4.2.

In the case of *ħabbeb*, considering that as mentioned earlier in §5.1, the distinction across the Ist and IInd *binyanim* verb-forms *ħabb* ~ *ħabbeb*, unlike *sieħ* ~ *sejjaħ*, involve an argument-structure distinction. The Ist *binyan* predicate takes a SUBJ and an OBJ as its subcategorised grammatical functions, while the IInd *binyan* predicate takes SUBJ, OBJ and OBL grammatical functions. What we end up with, as a result of this morphological complexity, is the situation illustrated in sentences (20) below, where it is now not the morphological forms which are giving us the argument-structure distinction, but it is rather the syntax itself which now helps disambiguate morphologically ambiguous forms. From a robust morphological system that brings about argument-structure alternations, (although of course not necessarily always the case), a larger weight on syntax has now to be imposed.

20. a. *Habbe-w* *lil* *xulxin*
loved-3.PL ACC each other
They loved each other *ħabb* 'love' <SUBJ, OBJ>
*They caused to love each other

b. *Habbe-w-hom* *ma'* *xulxin*
loved-3.PL-3PL.ACC with each other
They made them love each other *ħabbeb* 'cause to love' <SUBJ, OBJ, OBL>
*They loved them each other

The 3rd PERS PL form in (20a-b) is morphologically ambiguous, an ambiguity that is a property of the Ist *binyan* CVCC-derived IInd *binyan* verbal bases. It is only the nature of the argument-structure expressed in the syntax, which reflects the verb-form interpretation. When the additional morphological complexity manifest by overabundance is added on top of this, as is the case in the perfect PERS 1^2 cells, we get a similar effect, when the word-form common across both *binyanim* is used:

c. *Habbej-t* *lit-tfal*
loved-1SG ACC.DEF-children

I loved the children — *ħabb* 'love' <SUBJ, OBJ>
*I caused to love Mary

d. *Ħabbej-t/ħabbib-t* *lit-tfal* *ma'* *xulxin*
love.CAUSE-1SG ACC.DEF-children with each other
I made them love each other — *ħabbeb* 'cause to love' <SUBJ, OBJ, OBL>
*I loved Mary with each other

Therefore, when the semantic interpretation of the causative II[nd] *binyan* verb-form *ħabbeb* is intended, when the perfect 1[st] PERS SG verb-form *ħabbejt* is used instead of *ħabbibt*, it is not the morphological form that is denoting the syntactic valence of the verb, but it is rather the presence/absence of a preposition-headed constituent that functions as an OBL grammatical function, that in fact provides the semantic interpretation of the morphological form.

6. Conclusion

The study aimed to show that Maltese displays a number of interesting morphologically complex phenomena, with data also illustrating the interactions of these. All the occurrences of canonical divergence were here interpreted and understood as a complexity that is solely derived from an autonomous morphological component. This was particularly manifest through phenomena that result out of no obvious phonological motivations. It was shown that a stem pattern class need not be as complex, if ablaut-changes were not to be involved, as for most of the cases, these are derived out of a number of interacting hierarchically-ordered set of phonological constraints. Furthermore, different syllable structures redundantly result when overabundance is involved, as is also the case with heteroclisis, where nothing can synchronically account for why a non-heteroclite form is not present in the imperfect sub-paradigm. Moreover, an independence from phonology was also shown to be the case through the different paradigmatic behaviours of verbs which are in fact grouped together under the same verbal base classification as a result of their phonological make-up.

The fact that such members differ does not only reflect this morphological complexity, but it also aims to show that looking at an underlying representation, rather than at surface structure paradigms, the truth of what actually goes on in the paradigms, similar to the surface phonological classifications do not at times contribute to homogeneous morphological outcomes. Differences between the *laqat* and *ħataf*, and the *mar* and *żar* set of verbal base types, particularly illustrated this point. The former participate in the same stem pattern class, but the way the different paradigmatic slots are realized differs, whereas *mar* and *żar* were shown to belong to the same verbal base but differ in their stem pattern class membership, such that *mar* patterns with *laqat*, showing that the phenomenon of stem pattern formations cuts across verbal base types, and is not restricted to the member's phonological structure. The availability of stem-form overabundance (§4.2) showed us that morphology plays an important role in actually determining which cells are targeted and whether such overabundance needs involve a stem pattern class shift. By the availability of such shifts we see that a lexeme need not be a member of just one stem pattern class, and that there is some level of flexibility internal to the stem-form behaviour. It was also highlighted that stem allomorphy and the morphologically-induced conditions that change the stem-form, constitute another dimension to Maltese inflection that is non-concatenative, which coexists with the concatenative affixal exponents. Furthermore, all divergence from that which is canonical suggests that in Maltese, the morphological component is an important innovation that distances the Maltese paradigm from what one expects to find under a canonical account. This was shown to be the case not only through the increase in the number of stem-

forms, but also by having stem-forms that carry grammatical information. Additional complexity and non-canonical behaviour, via redundant ablaut-changes and overabundant forms, result in stem-forms that involve more feature-coherent realizations, moving the stem-form further away from the inert paradigmatic requirement and the lexical material function, adding to further divergence from the canon.

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